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ABSTRACT

This publication by the National Science Foundation (NSF) is a compilation of pertinent statistical information on the education and training of scientists and engineers in the United States primarily during the period of 1950-1960. This publication is divided into three parts: (1) human resources data; (2) data that deal with the institutional aspects of training in the sciences; and (3) appendix tables. (Author/CP)

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Statistical Handbook of Science Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Statistical Handbook of Science Education

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PREFACE

This publication is a compilation of pertinent statistical material on the education and training of scientists and engineers in the United States. It should prove useful as a statistical source book for those concerned with program administration and policy formulation in scientific and educational matters. It should also be useful to others having an interest in the educational system, particularly those concerned with the training of scientific and engineering manpower.

Certain screening criteria were used in the selection of data to be included. They had to be: (1) national in scope, (2) obtained from surveys receiving general acceptance, and (3) amenable to ease of presentation. An additional criterion was that a series was selected in preference to point-in-time data, if both covered the same subject matter. If no series were available on a specific topic, the most recent survey was used even though it might not completely reflect changes that may have occurred. In general, data are shown as reported in the original sources; in some instances data were highly selected or regrouped so as to bear more directly on science education.

The topics covered in this volume are not exhaustive of those that might be included in a publication of this type. More educational data of a general character appear than would normally be expected from the title. Because the *Statistical Handbook of Science Education* is the first publication issued by the National Science Foundation devoted exclusively to this topic, a great deal of material has been included which can be considered background data. The broad nature of these background data aids, it is believed, in placing much of the material in the proper perspective.

This publication is divided into three parts: the first is concerned with human resources data; the second presents a variety of data that deal with the institutional aspects of training in the sciences; and the third, appendix tables. Each subject included in Parts I and II is treated in a similar manner: a brief textual discussion, a text table, and a graph or chart all appearing on the same page. Although the primary objective of the *Handbook* is to present summary data in a convenient form, the statistical appendix is included to supply a frequently expressed need for detailed information. The appendix tables are also used to indicate the sources from which the data were obtained. For ease in reference, the numbering of appendix tables follows that of textual material, i.e., Figure 1 is based upon Appendix Table 1.

The publication was prepared in the Division of Scientific Personnel and Education by Richard J. Petersen under the general supervision of Robert W. Cain of the Scientific Manpower Program, Thomas J. Mills, Program Director. Recognition should be given to Miss Christine Capps for her conscientious and able assistance and William A. Jaracz for his valuable advice. The courtesy and helpfulness of the many individuals and agencies who supplied data is gratefully acknowledged; only with their assistance was the *Handbook* made possible.

The U.S. Department of Health, Education, and Welfare, especially the Office of Education; the National Education Association; the Bureau of the Census; and the Bureau of Labor Statistics are the sources of the most frequently used data.

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Part I

HUMAN RESOURCES

Errata

Figure 6, page 6, and Appendix Table 6

The academic years 1949-50 through 1957-58 should read one year later than shown. For example, total fall enrollment shown for academic year 1957-58 is in fact for academic year 1958-59.

Figure 1

POPULATION, LABOR FORCE, AND PROFESSIONAL OCCUPATIONS

The labor force as a proportion of the total population has remained relatively constant during this century—ranging between 35 and 40 percent of the total, with a slight decrease in the past decade. This is due almost exclusively to the low birthrate of the postdepression years followed by the high birthrate after World War II. The proportion of those in the professional, technical, and kindred occupations has increased steadily from 1900 to date. In 1900 less than 5 percent of the labor force was classified as professional; in 1958 over 10 percent. The data for the labor force and professional occupations were taken from two different series.

[In millions]

Year	Total population	Labor force	Professional, technical, and kindred	Year	Total population	Labor force	Professional, technical, and kindred
1958	173.3	64.0	7.3	1950	151.2	59.6	4.5
1957	170.3	65.0	6.5				
1956	167.3	64.9	6.1	1950	151.2	60.1	5.1
1955	164.3	63.0	5.8	1940	132.0	53.3	3.9
1954	161.2	61.2	5.6	1930	123.1	47.4	3.3
1953	158.3	61.8	5.4	1920	106.5	40.3	2.3
1952	155.8	61.0	5.4	1910	92.4	.....	1.8
1951	153.4	60.9	4.8	1900	76.1	27.6	1.2

SOURCE: U.S. Bureau of the Census and U.S. Bureau of Labor Statistics.

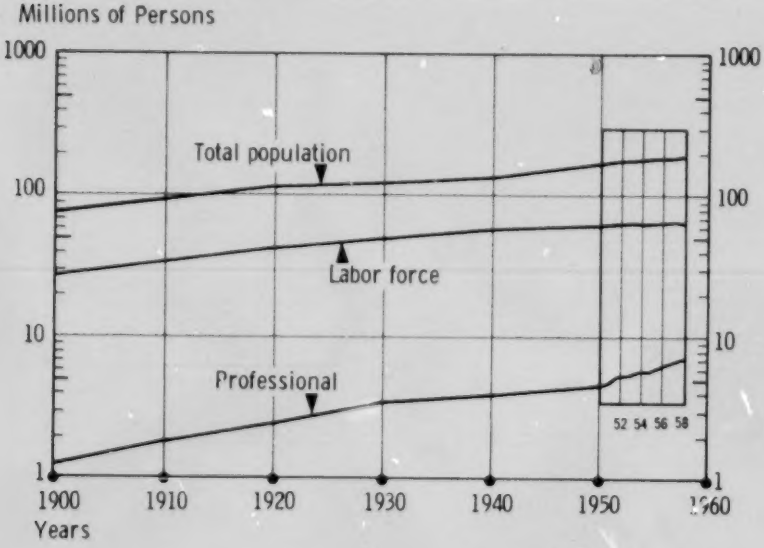

Figure 2

POPULATIONS OF SCHOOL AGE

The school age population (5–24 years) has increased continuously since 1900, except for a decline in the 1930's—a decline which is generally attributable to the decreased birthrate during the depression. The cohort groups born in the thirties have or should have completed their formal education by 1960. All indications are that the school age population will keep increasing rapidly for the foreseeable future. Projections of the Bureau of the Census estimate an increase in the school age group of 130 percent by 1970 over the 1900 totals and an increase of about 40 percent between 1958 and 1970.

[In millions]

Year	Age groups			Year	Age groups		
	5–13	14–17	18–24		5–13	14–17	18–24
1970	38.9	15.9	24.8	1952	24.5	8.7	14.6
1960	33.6	11.2	16.3	1951	22.9	8.5	15.1
				1950	22.3	8.4	15.8
1958	31.1	10.6	15.0				
1957	30.1	10.2	14.8	1940	19.9	9.8	16.5
1956	29.2	9.5	14.6	1930	22.3	9.4	15.5
1955	28.1	9.2	14.5	1920	20.1	7.9	13.0
1954	27.0	9.0	14.4	1910	17.4	7.2	12.8
1953	25.7	8.9	14.4	1900	15.4	6.1	10.4

SOURCE: U.S. Bureau of the Census.

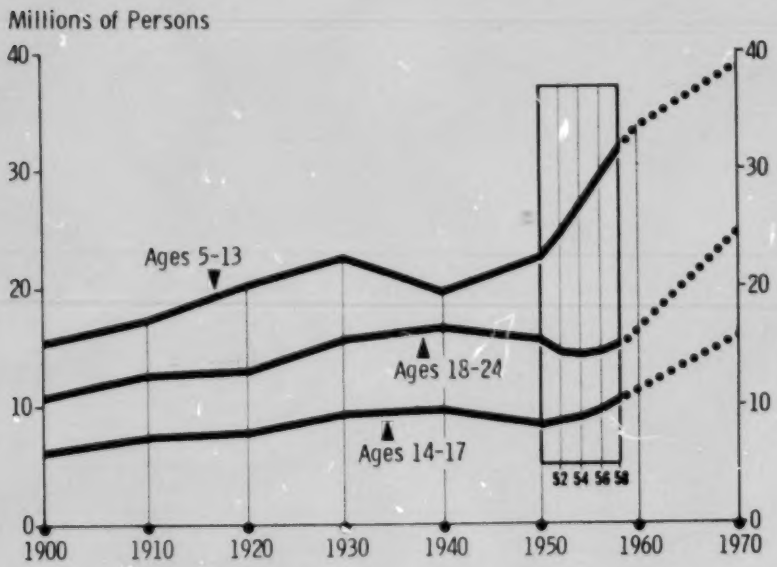

Figure 3

PRIME WORKING AGE GROUP, 20–44

The total population in the prime working age group, 20–44, has increased from less than 30 million in 1900 to 57 million in 1958 and will reach a projected figure of more than 65 million in 1970. A slight decline of 240 thousand was recorded for the years 1950–53; this counter trend was reversed in 1954; since 1955 there has been a continuous upward trend. In contrast, the proportion of the age group 20–44 in the total population has declined steadily since 1940. This is attributable to (a) the increased birthrate after World War II which was accompanied by a decrease in death rate for the younger age groups and (b) to greater longevity thereby increasing the number of people over 65 years of age.

[In millions]

Year	Total population	Population 20–44	Percent of 20–44 age group to total	Year	Total population	Population 20–44	Percent of 20–44 age group to total
1970	213.8	65.6	30.7	1952	155.9	56.6	36.3
1960	180.1	58.1	32.3	1951	153.4	56.6	36.9
				1950	151.2	56.8	37.5
1958	173.3	57.2	33.0				
1957	170.3	57.1	33.5	1940	132.0	51.4	39.0
1956	167.3	57.1	34.1	1930	123.1	47.2	38.4
1955	164.3	57.0	34.7	1920	106.5	41.0	38.5
1954	161.2	56.6	35.1	1910	92.4	36.2	39.1
1953	158.3	56.5	35.7	1900	76.1	28.8	37.9

SOURCE: U.S. Bureau of the Census.

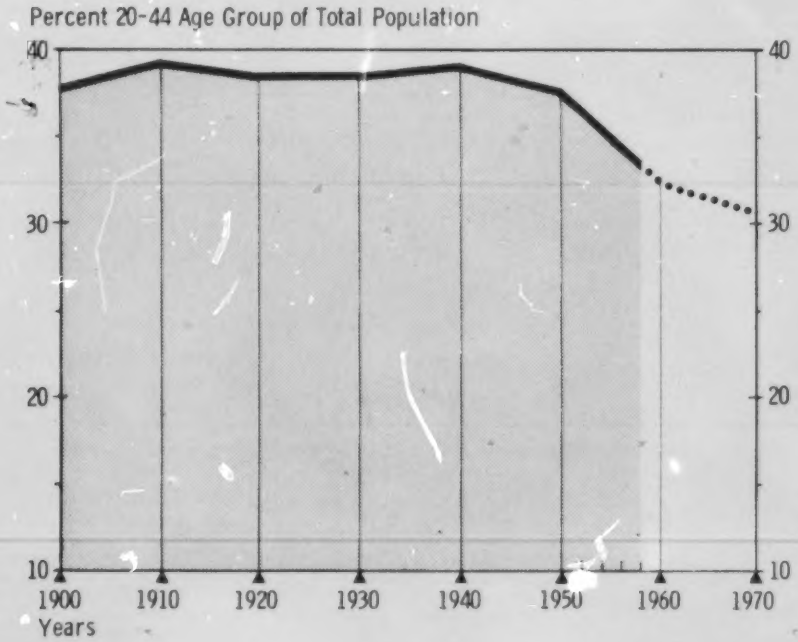

Figure 4

EDUCATIONAL ACHIEVEMENT OF AGE GROUP 25–34

It is estimated that an increasing proportion of the age group 25–34 will complete each educational level in successive decades. In 1920 only 61.6 percent completed eighth grade whereas in 1970, 93.0 percent should complete eighth grade. Similar trends are observable in the proportion completing high school and at least 4 years of college—to an anticipated high of 66.2 percent completing high school and of 12.3 percent completing a minimum of 4 years of higher education.

Year	Years of schooling completed; percent of age group 25–34 with—			Year	Years of schooling completed; percent of age group 25–34 with—		
	At least 8 but less than 12	At least 12 but less than 16	16 or more		At least 8 but less than 12	At least 12 but less than 16	16 or more
1970	93.0	66.2	12.3	1940	77.8	38.1	7.3
1960	90.0	60.0	10.6	1930	69.8	28.6	6.1
1950	84.8	50.3	7.6	1920	61.6	22.1	4.7

SOURCE: U.S. Bureau of the Census.

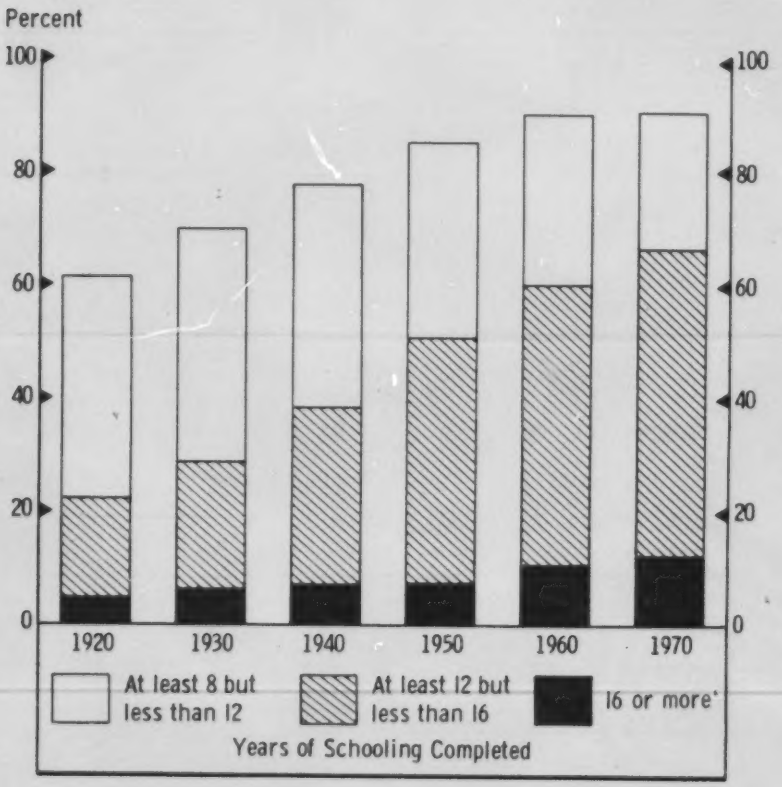

Figure 5

ENROLLMENTS IN ELEMENTARY AND SECONDARY SCHOOLS

There was a sharp rise in total enrollments between 1900 and 1958 in public and private elementary and secondary schools. The general trend is expected to continue through 1960 and into the forseeable future. Although both elementary and secondary school enrollments have increased during this century, secondary school enrollments increased much more rapidly between 1900 and 1940 than did elementary enrollments. In the past decade enrollments in both types of schools increased at about the same rate. The trend in elementary school enrollments is somewhat smoother, indicating one of the effects of compulsory education laws.

[In millions]

School year	Enrollments			School year	Enrollments		
	Total	Elementary	Secondary		Total	Elementary	Secondary
1964–65	47.2	34.8	12.4	1951–52	30.6	24.0	6.6
1959–60	42.7	33.5	9.2	1949–50	28.7	22.2	6.5
1958–59	40.9	32.0	8.9	1939–40	28.3	21.1	7.1
1957–58	39.1	30.7	8.4	1929–30	28.6	23.7	4.8
1956–57	37.5	29.7	7.8	1919–20	23.5	21.0	2.5
1955–56	36.3	28.5	7.7	1909–10	19.6	18.5	1.1
1954–55	35.2	27.7	7.4	1899–1900	17.0	16.3	.7
1953–54	33.4	26.3	7.1				

SOURCE: U.S. Office of Education.

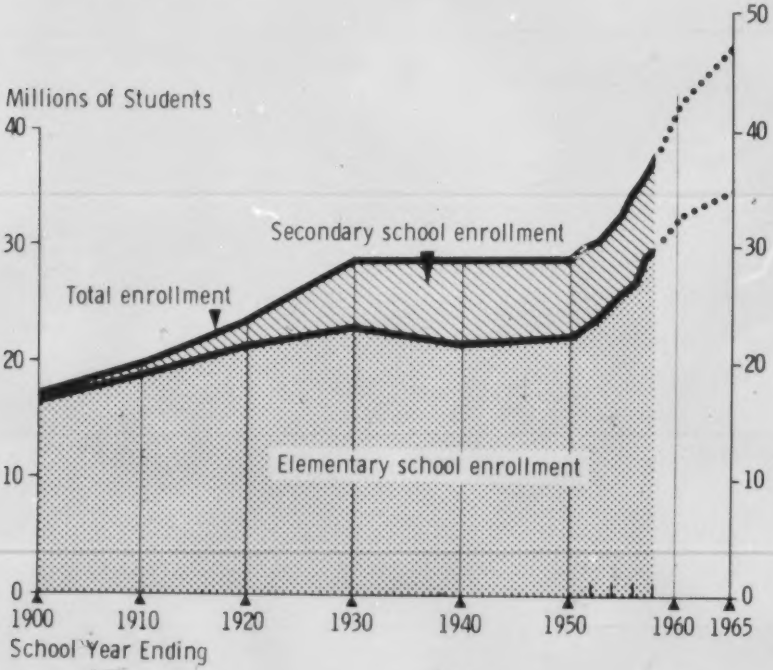

Figure 6

ENROLLMENTS IN INSTITUTIONS OF HIGHER EDUCATION

Enrollments in institutions of higher education increased markedly from 1900 through 1958. The upward trend was steady during this period aside from the drop in enrollments in the early 1940's (not shown in the table or chart) and a slight decline in total enrollments in the early 1950's. The sharp rise to 1950 was due primarily to large scale enrollment of veterans. Starting in 1953, enrollments set new record highs—a trend which is expected to continue for some time.

[In thousands]

Academic year	Fall enrollment			Academic year	Fall enrollment		
	Total	Undergraduate	Graduate		Total	Undergraduate	Graduate
1969–70	6,006	5,447	559	1951–52	2,148	1,931	217
1959–60	3,567	3,235	332	1950–51	2,116	1,915	201
				1949–50	2,297	2,092	204
1957–58	3,259	2,949	310	1939–40	1,494	1,388	106
1956–57	3,068	2,777	291	1929–30	1,101	1,053	47
1955–56	2,947	2,667	280	1919–20	598	582	16
1954–55	2,679	2,411	268	1909–10	355	346	9
1953–54	2,500	2,225	275	1899–1900	238	232	6
1952–53	2,251	2,014	236				

SOURCE: U.S. Office of Education.

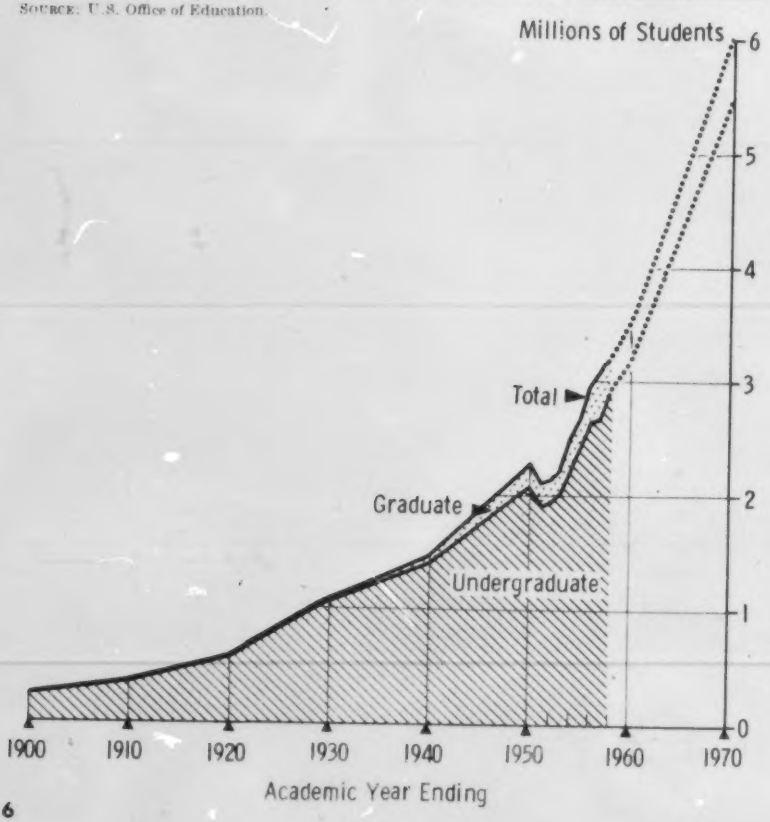

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Figure 7

TOTAL OR GROSS RETENTION IN THE EDUCATIONAL SYSTEM

A measure of the school age population remaining in or retained by the educational system is the proportion of all pupils who complete successive years of schooling. This table represents an estimate of the number of pupils, out of every 1,000 enrolled in the fifth grade, who entered high school, the number graduating from high school, and the number who entered college. In 1954–55, 885 entered high school out of 1,000 students enrolled in the fifth grade in the school year 1950-51; 4 years later in 1958, 584 pupils graduated from high school and 299 entered college. There has been an increasingly larger group of pupils retained in the educational system within the past years.

Year graduated from high school	Retention per 1,000 pupils in 5th grade			Year graduated from high school	Retention per 1,000 pupils in 5th grade		
	Number entering high school 4 years earlier	Number graduating from high school	Number entering college in fall		Number entering high school 4 years earlier	Number graduating from high school	Number entering college in fall
1958	885	584	299	1953	872	524	266
1957	874	573	293	1952	848	522	234
1956	863	581	297	1951	827	524	218
1955	858	559	286	1950	807	505	205
1954	872	553	283				

SOURCE: U.S. Office of Education.

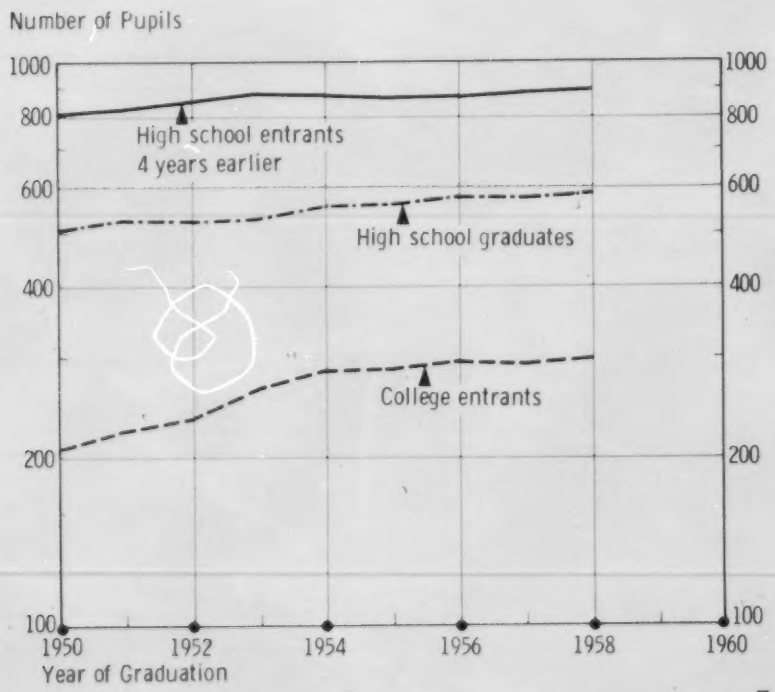

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Figure 8

TOTAL IMMEDIATE EDUCATIONAL RETENTION, 1956

Another measure of educational retention is the measurement of the number of high school seniors enrolling in college in the fall following high school graduation. Of those boys planning to go to college nearly 70 percent were enrolled the following fall; nearly 9 percent of the boys who had not planned to go to college did, in fact, enroll. Of the girls who had college plans over 60 percent went; 5 percent of the girls not planning to attend college also enrolled. Since nearly 10 percent of the boys planning to go to college and nearly 30 percent of those not planning to go were in military service final retention might be even greater.

[Percent]

Fall 1956, activities after high school	College plans of seniors of 1955			
	Planned to go		Planned not to go	
	Boys	Girls	Boys	Girls
All students	100.0	100.0	100.0	100.0
In college	67.7	61.7	8.8	5.1
In military service	9.9	.3	27.2	.5
Full-time job	17.4	22.6	55.9	63.7
Other	5.0	15.4	8.1	30.7

SOURCE: Educational Testing Service.

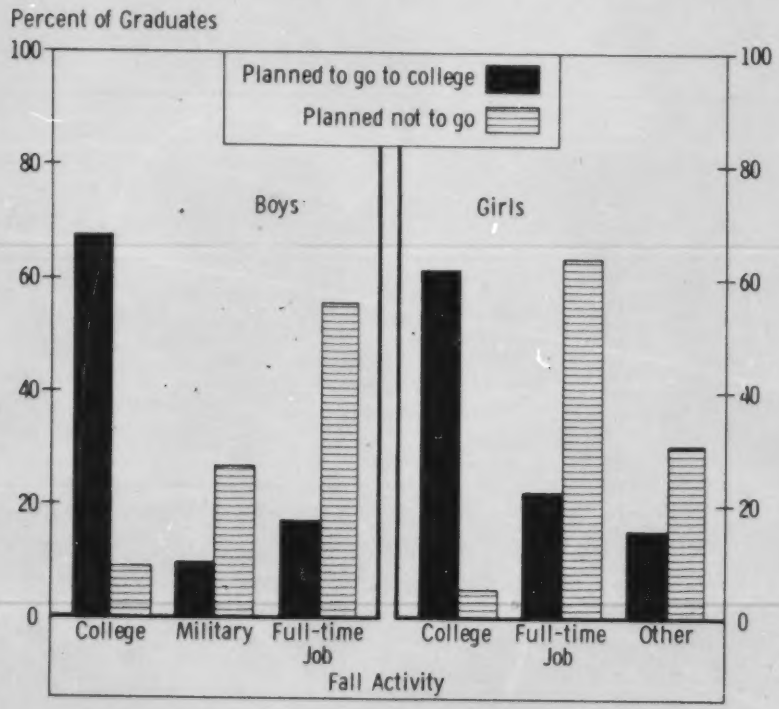

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Figure 9

RETENTION BY ABILITY LEVEL, 1956

Ability level is an important factor in the determination of whether high school graduates plan to continue their education and whether they enroll in an institution of higher education. Whereas less than half (45 percent) of the male students planned to go to college and slightly more than a third (36 percent) actually enrolled in the fall, over four-fifths (81 percent) of the upper 10 percent planned to go and three-quarters enrolled. Similarly, 37 percent of all girls planned to go, with subsequent enrollment by 27 percent; 67 percent of the upper 10 percent planned to go and 60 percent enrolled.

College plans and enrollments of high school seniors, 1956

Ability level	Percent of all students			
	Boys		Girls	
	Planned to go to college	Enrolled in college	Planned to go to college	Enrolled in college
Total	45	36	37	27
(Highest 10%)	(81)	(75)	(67)	(60)
Upper 30%	68	60	56	46
Middle 30%	43	36	36	26
Lowest 30%	28	17	26	14

SOURCE: Educational Testing Service.

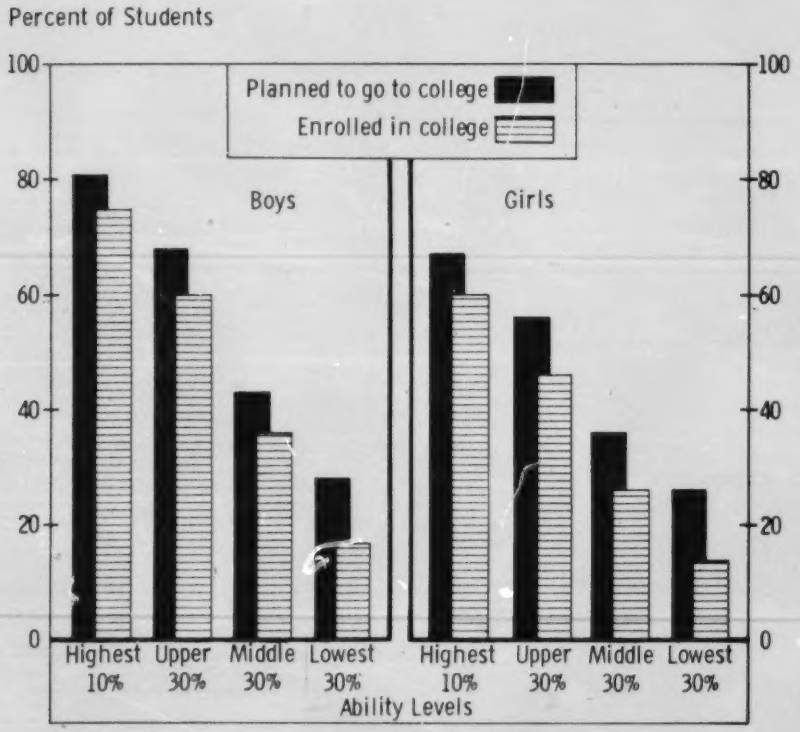

Figure 10

ENROLLMENTS IN HIGH SCHOOL SCIENCE AND MATHEMATICS COURSES, 1956

In 1956, high school science courses enrolled between one-fourth and three-fourths of the students in the classes appropriate to that course. The highest concentration was at the sophomore level where 75 percent of the class were enrolled in biology. About 25 percent of the senior class was enrolled in physics. Over two-thirds of the freshmen were enrolled in elementary algebra and about one-eighth of the seniors took plane trigonometry and solid geometry.

Courses	Typical grade level	Percent of pupils enrolled of total in class				
		All	Regular 4-year	Senior	Junior-senior	Undivided
General science	9	67.0	70.0		70.2	73.5
Biology	10	75.5	76.2	69.7	81.0	78.9
Chemistry	11	34.6	33.5	36.2	35.1	32.9
Physics	12	24.3	21.7	26.1	26.0	21.3
Elementary algebra	9	67.0	69.5		69.2	68.0
Plane geometry	10	41.6	40.3	43.8	41.7	37.8
Intermediate algebra	11	32.2	29.6	34.5	31.4	35.3
Plane trigonometry and solid geometry	12	16.8	15.0	17.0	19.3	15.0

SOURCE: U.S. Office of Education.

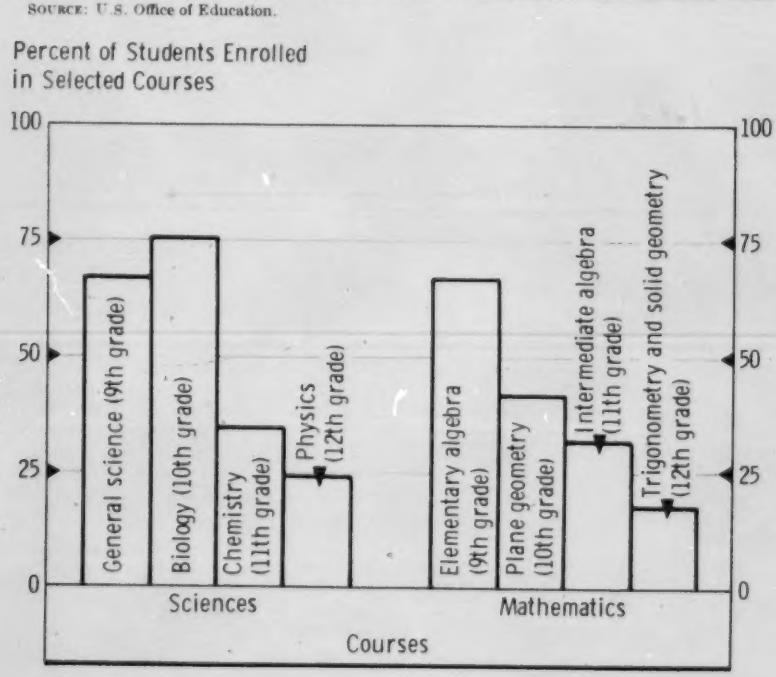

Figure 11

ENROLLMENTS IN TECHNICAL INSTITUTES

Students enrolled in post-secondary educational programs of technical training which do not ordinarily lead to a bachelor's degree are another aspect of scientific and technical training. It is of interest to note that the highs and lows precede those recorded for total enrollment in 4-year colleges, but coincide closely with the enrollment trends in schools of engineering. The data presented here do not include totals for students trained in military service technician schools, nor of in-service training programs of industrial firms.

[In thousands]

Academic year	Number of students			Academic year	Number of students		
	Total	Full-time	Part-time		Total	Full-time	Part-time
1957–58	76.3	40.0	36.2	1950–51	46.4	24.3	22.1
1956–57	57.6	32.5	25.1	1949–50	51.7	31.7	20.1
1955–56	67.2	31.1	36.0	1948–49	52.9	33.3	19.5
1954–55	60.7	26.8	34.0	1947–48	47.6	30.9	16.7
1953–54	50.9	21.5	29.4	1946–47	49.4	29.1	20.3
1952–53	52.7	18.8	33.9	1945–46	18.7	10.8	7.9
1951–52	46.4	19.6	26.8	1944–45	18.9	8.7	10.2

SOURCE: *The Technical Institute* and U.S. Office of Education.

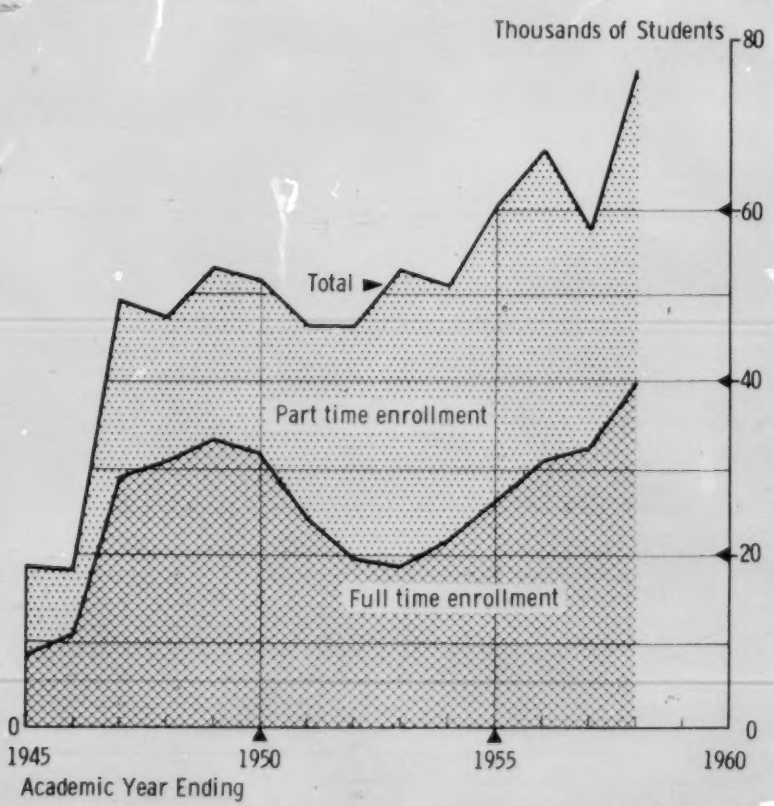

Figure 12

ENGINEERING ENROLLMENTS

In the 2-year period following World War II (1945–46 to 1947–48) total enrollment in engineering increased almost 200 percent, an increase attributable primarily to the influx of veterans into higher education. A decline in enrollments followed the peak enrollment of 1947–48 that was not exceeded until 1956–57. In 1957–58 a new high of nearly 300,000 students was recorded. From that high, total enrollment decreased to about 280,000 in 1959–60. It is anticipated that by 1969–70 total enrollment will exceed the half-million figure. Graduate enrollments have shown a continuous growth since 1945–46 (except for 1954–55 when there was a drop of less than 1,000) to the alltime high of over 35,000 reported in 1959–60.

[In thousands]

Academic year	Enrollments			Academic year	Enrollments		
	Total	Undergraduate	Graduate		Total	Undergraduate	Graduate
1969–70	551.0	495.9	55.1	1952–53	176.5	156.1	20.5
1959–60	278.3	243.0	35.3	1951–52	165.6	146.0	19.6
1958–59	289.7	256.8	32.9	1950–51	180.3	161.6	18.7
1957–58	297.1	268.8	28.3	1949–50	219.7	201.9	17.8
1956–57	277.1	251.1	25.9	1948–49	249.8	234.2	15.6
1955–56	243.4	221.4	21.9	1947–48	252.2	237.9	14.3
1954–55	214.4	193.7	20.7	1946–47	211.9	197.8	14.1
1953–54	193.3	171.7	21.6	1945–46	73.1	69.1	3.9

SOURCE: U.S. Office of Education.

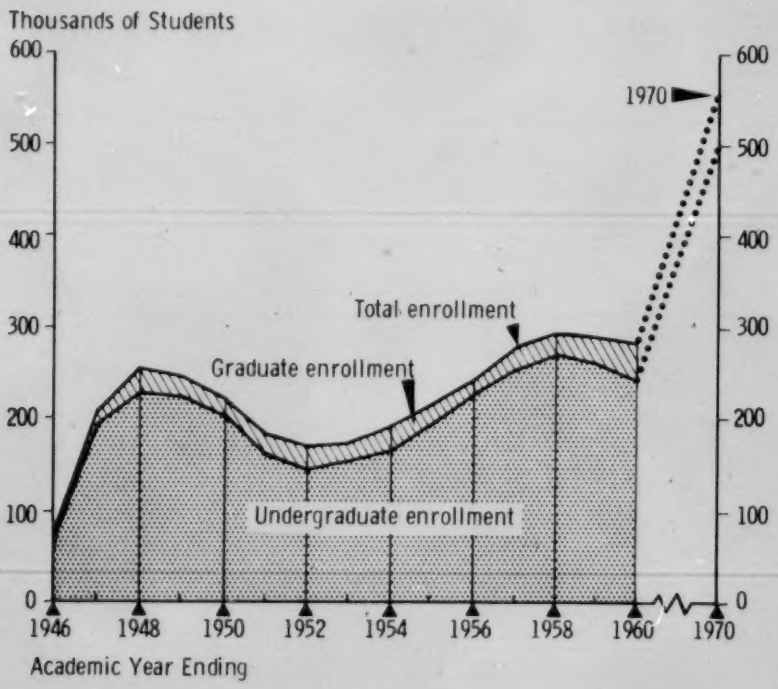

Figure 13

JUNIOR-YEAR COLLEGE STUDENTS IN SCIENCE AND MATHEMATICS, 1957 AND 1958

Between the fall of 1957 and 1958 the number of junior-year students enrolled as majors in science and mathematics increased about 10 percent. Enrollments of men increased by less than 10 percent and of women by 13 percent. Enrollments in mathematical subjects increased by more than 30 percent, while the amount of increase was only 6 percent in biological sciences and about 4 percent in physical sciences. Total enrollments in institutions of higher education increased by less than 5 percent over the same period.

[In thousands]

Field	Number of junior-year college students					
	Total		Men		Women	
	1957	1958	1957	1958	1957	1958
Total science	50.5	55.8	40.5	44.5	10.0	11.3
Biological sciences	19.8	21.1	15.3	16.4	4.5	4.7
Mathematics	9.1	12.0	6.5	8.6	2.6	3.4
Physical sciences	19.1	19.8	16.9	17.5	2.7	2.4
Science, general program	2.5	2.9	1.8	2.1	.7	.8

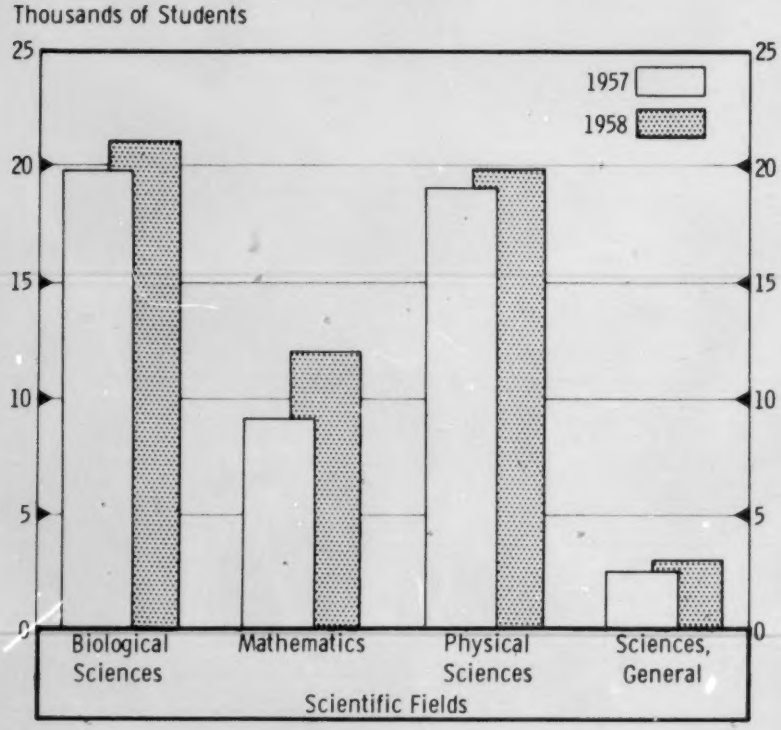

Figure 14

GRADUATE ENROLLMENTS: TOTAL, AND SCIENCE AND ENGINEERING 1953–54

Less than 30 percent of total reported graduate enrollment in the academic year 1953-54 was in the sciences and engineering; however, nearly 40 percent of enrollments in the advanced years were in science and engineering fields. Over 75 percent of all special students were enrolled in non-science fields.

[In thousands]

Field	Graduate enrollment			Special
	Total	First year	Advanced years	
Total	171.6	93.5	58.3	19.7
Science and engineering	50.9	23.3	22.9	4.6
All other	120.7	70.2	35.4	15.1

SOURCE: National Science Foundation.

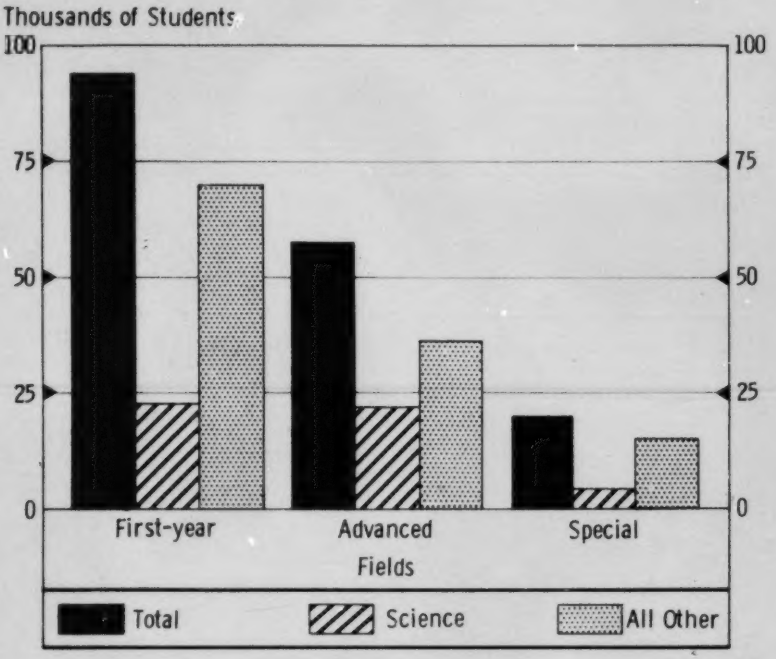

Figure 15

GRADUATE ENROLLMENTS: SCIENCE AND ENGINEERING, 1953–54

Almost the same number of graduate students in science and engineering were enrolled as first-year students as were reported for advanced year enrollment. Nearly two-thirds of those enrolled in engineering were on a part-time basis; the reverse was true in the physical and life sciences where between two-thirds and three-fourths of the students were enrolled on a full-time basis. About one-half of all graduate students in mathematics were enrolled on a full-time basis.

[In thousands]

Field	Graduate enrollment			
	First year		Advanced years	
	Full-time	Part-time	Full-time	Part-time
Engineering	2.9	6.8	1.9	2.6
Physical sciences	4.3	2.2	6.8	2.3
Mathematics	.8	.9	1.0	.6
Life sciences	4.0	1.4	5.8	1.9

SOURCE: National Science Foundation.

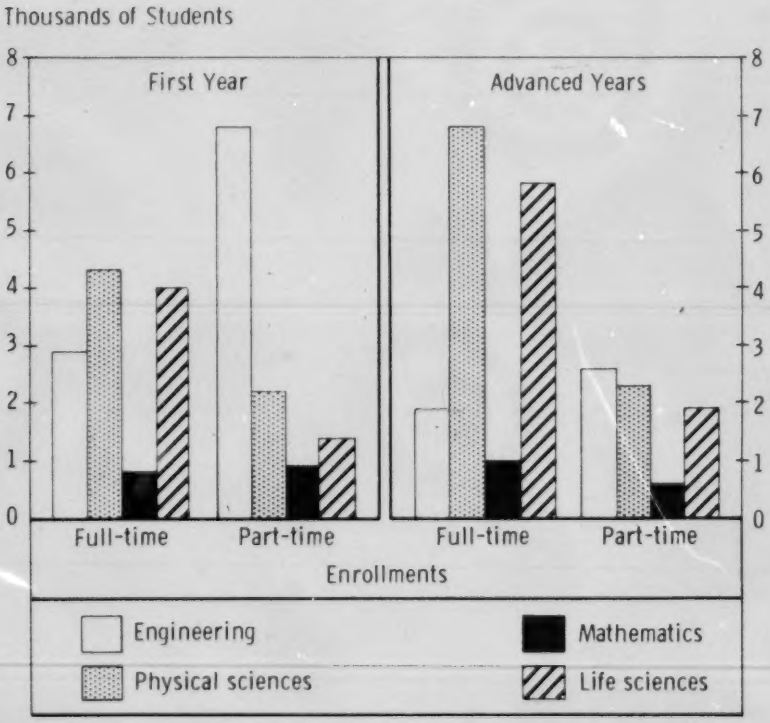

Figure 16

HIGH SCHOOL AND COLLEGE GRADUATES IN THE POPULATION

The proportion of the population of the United States who are high school graduates will nearly double between 1940 and 1970; in absolute figures there will be nearly three times as many. Similar trends are anticipated for those holding college degrees. Although the overall tendencies are representative of both the total male and female populations, it is of interest to note that a smaller proportion of males than females graduate or will graduate from high school whereas a larger proportion of all males graduate or will graduate from college.

Year	High school graduates as a percent of population, 15 years and over			College graduates as a percent of population, 20 years and over		
	Total	Male	Female	Total	Male	Female
1970	48.0	45.7	50.1	8.5	10.7	6.5
1960	41.7	39.7	43.5	7.3	9.0	5.8
1950	35.0	32.9	36.9	6.0	7.0	5.1
1940	26.0	24.0	28.0	4.5	5.2	3.7

SOURCE: U.S. Bureau of the Census.

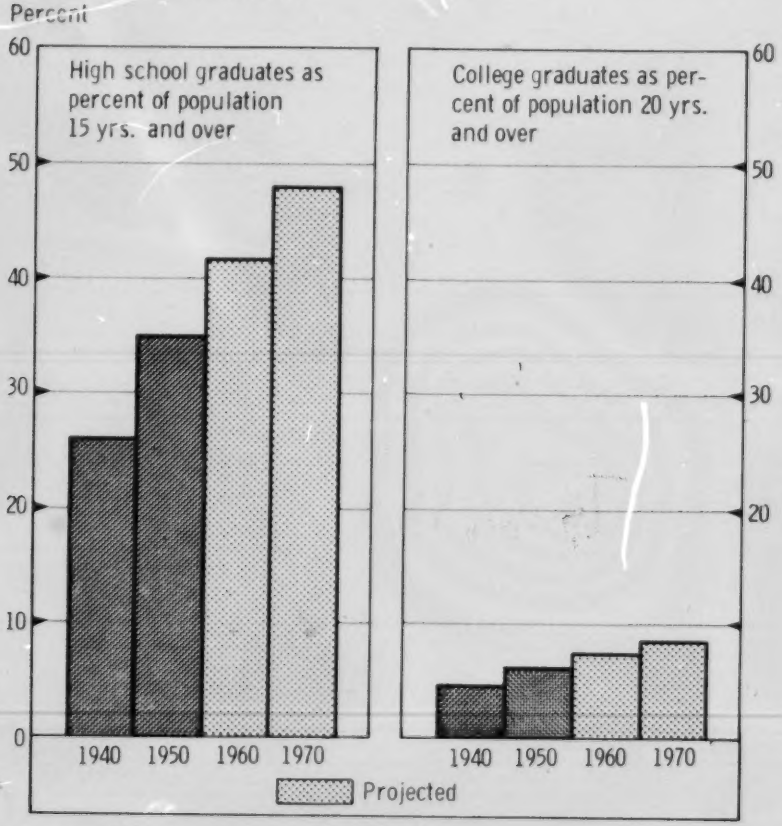

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Figure 17

HIGH SCHOOL GRADUATES

The number of students graduating from high school increased rapidly between 1900 and 1940. There was a decline of approximately 20,000 in 1950 from the figure reported for 1940, a decline which continued through 1951 and is attributable to the smaller cohort group born in the thirties. Beginning in 1952 there has been an increase of high school graduates reported each succeeding year. In general the number of graduates from public high schools determines the trend line for the total number of graduates. Private high school graduates show a rate of increase similar to public graduates for the present decade, although increasing much less rapidly during the first half of this century.

[In thousands]

School year	High school graduates			School year	High school graduates		
	Total	Public	Private		Total	Public	Private
1965	2,542	2,250	292	1952	1,197	1,056	141
1960	1,903	1,596	307	1951	1,182	1,045	137
				1950	1,200	1,063	136
1958	1,522	1,347	175				
1957	1,458	1,290	168	1940	1,221	1,143	78
1956	1,415	1,252	163	1930	667	605	62
1955	1,344	1,189	155	1920	311	275	36
1954	1,276	1,129	147	1910	156	111	45
1953	1,198	1,058	140	1900	95	62	33

SOURCE: U.S. Office of Education.

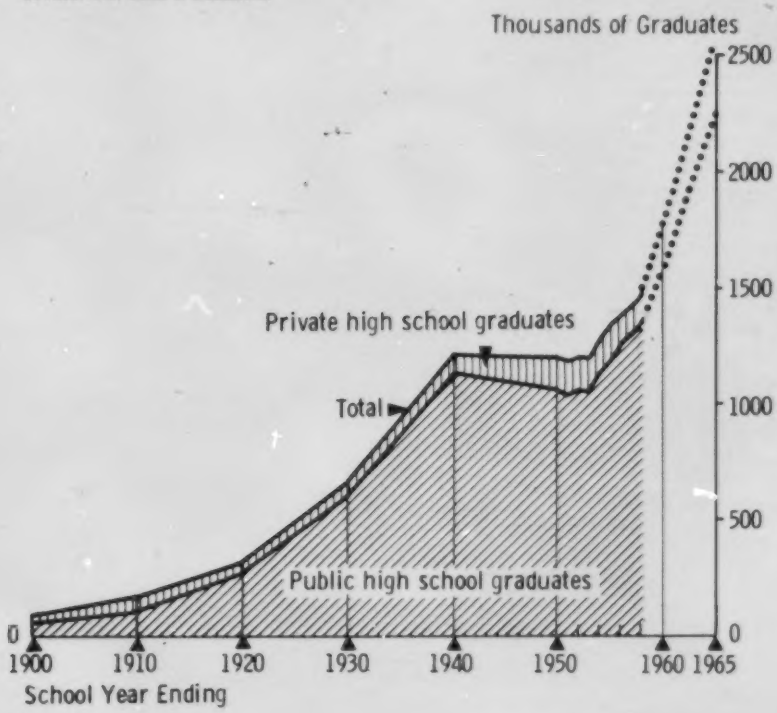

Figure 18

HIGH SCHOOL SCIENCE AND MATHEMATICS COURSES COMPLETED BY 1957 GRADUATES

Over 98 percent of the 1957 high school graduates had at least one year of science and one of mathematics. Nearly 75 percent of all graduates had at least 2 years of mathematics and over 75 percent had at least 2 years of science. The proportion of students completing any specific number of science courses was almost identical with the number of mathematics courses completed.

Number of year courses completed	Percent of total graduates		Number of year courses completed	Percent of total graduates	
	Mathematics	Science		Mathematics	Science
Total	100.0	100.0	2 to 3 years	35.2	36.9
			1 to 2 years	25.6	22.8
4 years or more	14.4	14.2	No mathematics or science	1.9	1.5
3 to 4 years	22.9	24.6			

SOURCE: U.S. Office of Education.

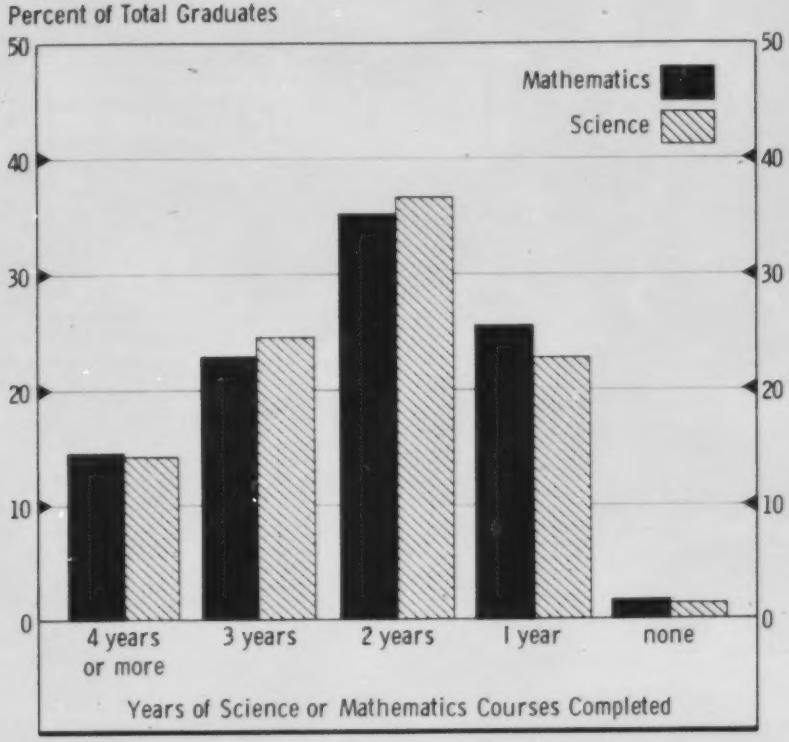

Figure 19

ALL DEGREES AWARDED IN HIGHER EDUCATION, BY LEVEL

The number of earned degrees awarded by institutions of higher education increased from 27,000 in 1900 to a high of nearly 500,000 in 1950—a peak which has not been exceeded to date, although estimates for 1960 and 1970 suggest a continued and rapid increase in future degrees granted. This trend follows the pattern of bachelor's degrees. Master's and doctor's degrees awarded display similar characteristics, but the peaks were later—1951 for master's and 1954 for doctor's—and the recovery was more rapid.

[In thousands]

Academic year	Number of degrees			
	All degrees	Bachelor's	Master's	Doctor's
1969–70	875.1	718.0	139.0	18.1
1959–60	490.4	405.0	75.7	9.7
1957–58	440.3	365.7	65.6	8.9
1956–57	411.1	340.3	62.0	8.8
1955–56	379.5	311.3	59.3	8.9
1954–55	354.4	287.4	58.2	8.8
1953–54	358.7	292.9	56.8	9.0
1952–53	374.2	304.9	61.0	8.3
1951–52	403.2	331.9	63.6	7.7
1950–51	456.8	384.4	65.1	7.3
1949–50	498.6	433.7	58.2	6.6
1939–40	216.5	186.5	26.7	3.3
1929–30	139.8	122.5	15.0	2.3
1919–20	53.5	48.6	4.3	.6
1909–10	36.7	34.2	2.1	.4
1899–1900	27.3	25.3	1.6	.4

SOURCE: U.S. Office of Education.

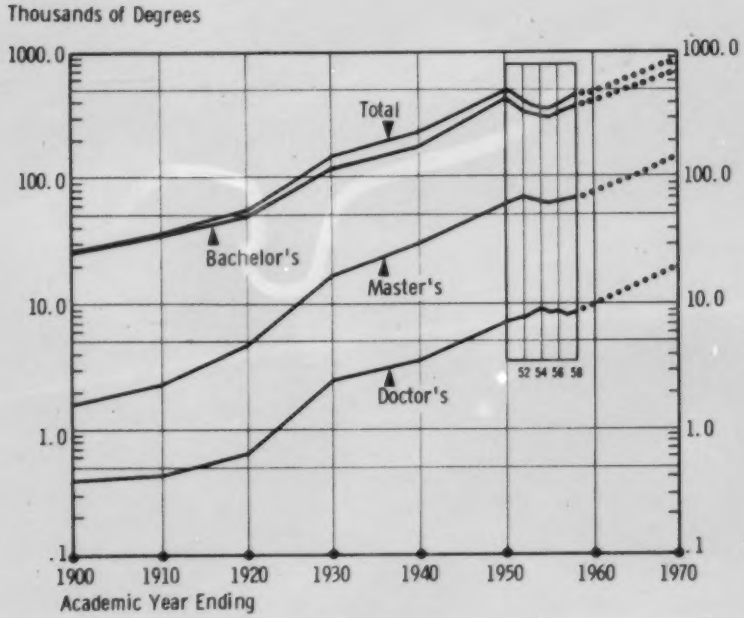

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Figure 20

BACHELOR'S DEGREES IN ALL FIELDS AND SCIENCE AND ENGINEERING

Science and engineering bachelor's degrees awarded each year between 1948 and 1958 followed the general pattern for all bachelor's degrees awarded, i.e., rising to a high point in 1950, declining through 1955 and increasing thereafter. Although data are not presented by sex (an important conditioning factor), it is still pertinent to note that with the increase of all degrees in recent years, science and engineering accounted for a larger proportion of the total.

[In thousands]

Academic year	Number of degrees			
	All degrees	All science and engineering	Science	Engineering
1957-58	365.7	77.8	42.5	35.3
1956-57	340.3	70.2	39.0	31.2
1955-56	311.3	61.3	35.0	26.3
1954-55	287.4	53.4	30.8	22.6
1953-54	292.9	53.5	31.2	22.3
1952-53	304.8	57.5	33.3	24.2
1951-52	331.9	68.2	37.7	30.5
1950-51	384.4	88.5	47.0	41.5
1949-50	433.7	108.8	56.5	52.2
1948-49	366.7	87.7	44.1	43.6
1947-48	272.1	66.0	34.9	31.1

SOURCE: U.S. Office of Education.

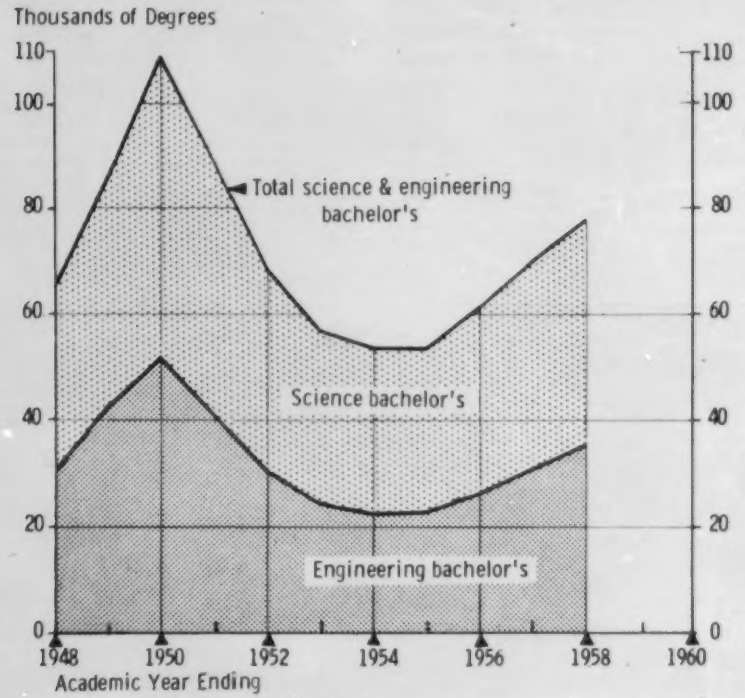


Figure 21

MASTER'S DEGREES IN ALL FIELDS AND SCIENCE AND ENGINEERING

A pattern similar to that shown for bachelor's degrees emerges when comparing all master's degrees awarded to all science and engineering master's degrees. There are, however, several differences which should be noted. In both total and in science and engineering master's degrees the high point in 1951 was 1 year later and the upward trend began 1 year earlier in 1954, although total science and engineering degrees had a relative decrease in 1956. Further, the ratio of science and engineering degrees to all degrees was not as stable as that found at the baccalaureate level.

[In thousands]

Academic year	Number of degrees			
	All degrees	All science and engineering	Science	Engineering
1957–58	65.6	16.5	10.7	5.8
1956–57	62.0	14.7	9.4	5.2
1955–56	59.3	13.6	8.9	4.7
1954–55	58.2	14.2	9.7	4.5
1953–54	56.8	13.4	9.2	4.2
1952–53	61.0	13.8	10.2	3.6
1951–52	63.6	15.7	11.6	4.1
1950–51	65.1	17.1	12.3	4.8
1949–50	58.2	16.0	11.5	4.5
1948–49	50.8	14.9	10.2	4.6
1947–48	42.4	12.5	8.3	4.2

SOURCE: U.S. Office of Education.

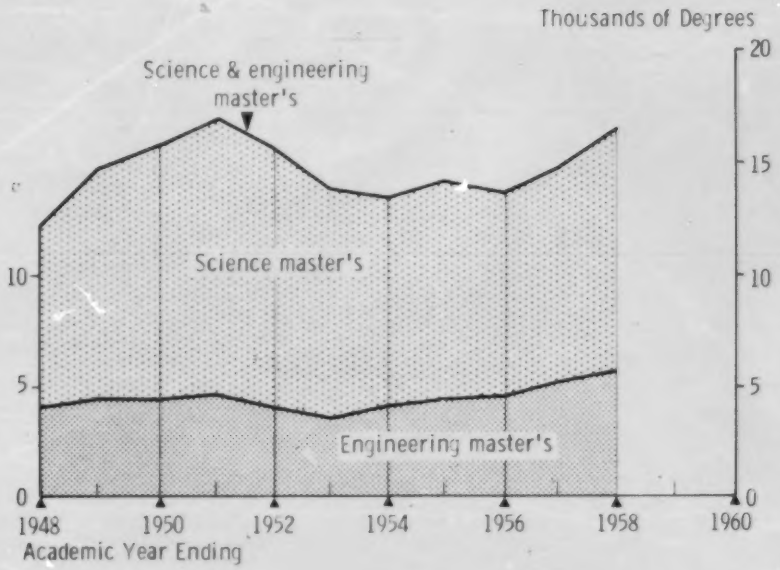


Figure 22

DOCTOR'S DEGREES IN ALL FIELDS AND SCIENCE AND ENGINEERING

For the first 4 decades of this century the number of doctor's degrees awarded in all fields increased by more than 50 percent every decade, except between 1930 and 1940 (when it was 46 percent). Similarly, all science and engineering doctoral degrees have increased at a rapid rate. During the present decade, the annual number of all doctorates and of science and engineering doctorates has shown a tendency to follow the pattern established for bachelor's and master's degrees. The variations, however, have been relatively small. During the 1950's science and engineering doctorates have accounted for between 54 and 58 percent of all doctor's degrees awarded each year.

Academic year	Number of degrees			
	All degrees	All science and engineering	Science	Engineering
1957–58	8,942	4,840	4,193	647
1956–57	8,756	4,764	4,168	596
1955–56	8,903	4,787	4,177	610
1954–55	8,840	5,036	4,437	599
1953–54	8,996	5,053	4,459	594
1952–53	8,309	4,724	4,206	518
1951–52	7,683	4,408	3,879	529
1950–51	7,338	4,212	3,692	520
1949–50	6,633	3,593	3,176	417
1939–40	3,290	1,812	.....	.....
1929–30	2,261	1,072	.....	.....
1919–20	566	323	.....	.....
1909–10	362	180	.....	.....
1899–1900	239	102	.....	.....

SOURCE: National Science Foundation.

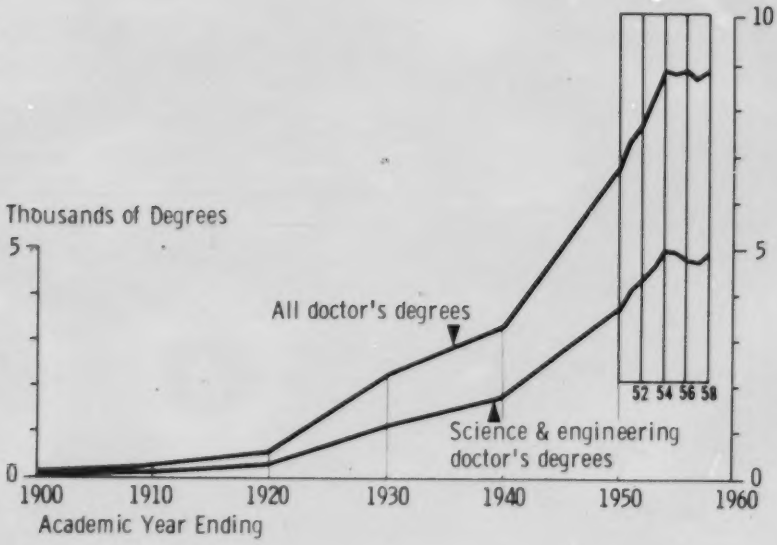


Figure 23

DOCTOR'S DEGREES IN SCIENCE AND ENGINEERING

Science and engineering degrees accounted for over one-half of all doctoral degrees awarded between 1936 and 1958. Physical science doctorates accounted for 40 percent of all science and engineering doctorates, engineering for 10 percent, the life sciences for 45 percent, and mathematics for 5 percent. The number of engineering doctorates granted annually increased almost a hundredfold during this period; physical sciences increased by more than twofold; mathematics tripled; and the number of doctorates in life sciences grew nearly fourfold.

Year	Number of doctor's degrees			
	Engineering	Physical sciences	Mathematics	Life sciences
1958	655	1,797	236	2,355
1957	603	1,836	260	2,402
1956	576	1,729	226	2,115
1955	648	1,798	243	2,374
1954	560	1,804	247	2,309
1953	565	1,781	226	2,229
1952	569	1,804	204	1,725
1951	586	1,778	204	1,681
1950	469	1,686	174	1,458
1948	252	931	117	853
1946	101	466	53	398
1944	61	574	40	443
1942	83	850	75	848
1940	97	783	102	832
1938	65	653	61	697
1936	68	698	78	621

SOURCE: National Academy of Sciences, National Research Council.

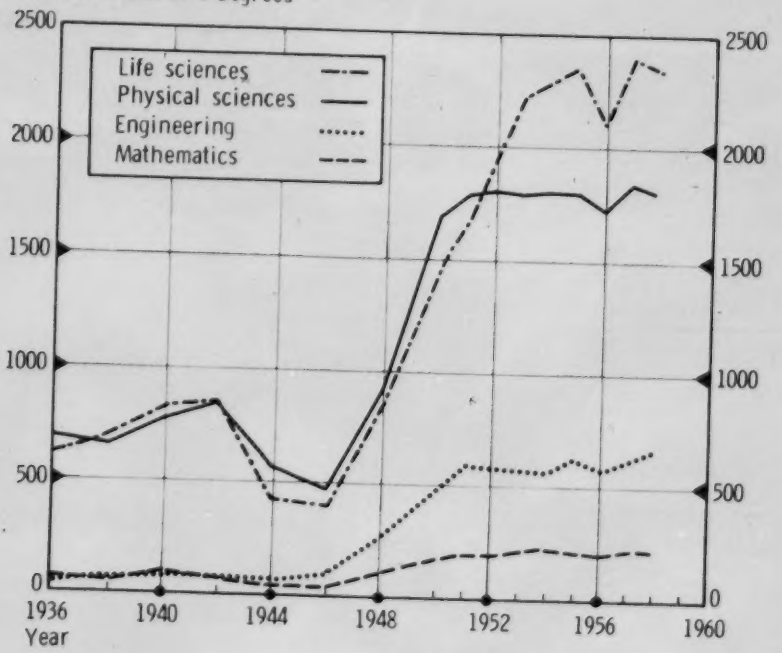


Figure 24

TEACHERS IN ELEMENTARY AND SECONDARY SCHOOLS

The number of teachers in elementary and secondary schools has increased steadily since the turn of the century. In general, the number of teachers is closely related with enrollments. Therefore, with the sharp upturn expected in the number of elementary and secondary school students, there will be substantial increase in teachers required.

[In thousands]

Academic year	Number of teachers			Academic year	Number of teachers		
	Total	Public	Non-public		Total	Public	Non-public
1957–58	1,412	1,254	158	1949–50	1,032	914	118
1956–57	1,342	1,197	145				
1955–56	1,266	1,136	130	1939–40	970	875	95
1954–55	1,202	1,066	136	1929–30	938	854	84
1953–54	1,166	1,032	134	1919–20	738	678	60
1952–53		993		1909–10	569	523	46
1951–52	1,087	963	124	1899–1900	460	423	37
1950–51		928					

SOURCE: U.S. Office of Education and National Education Association.

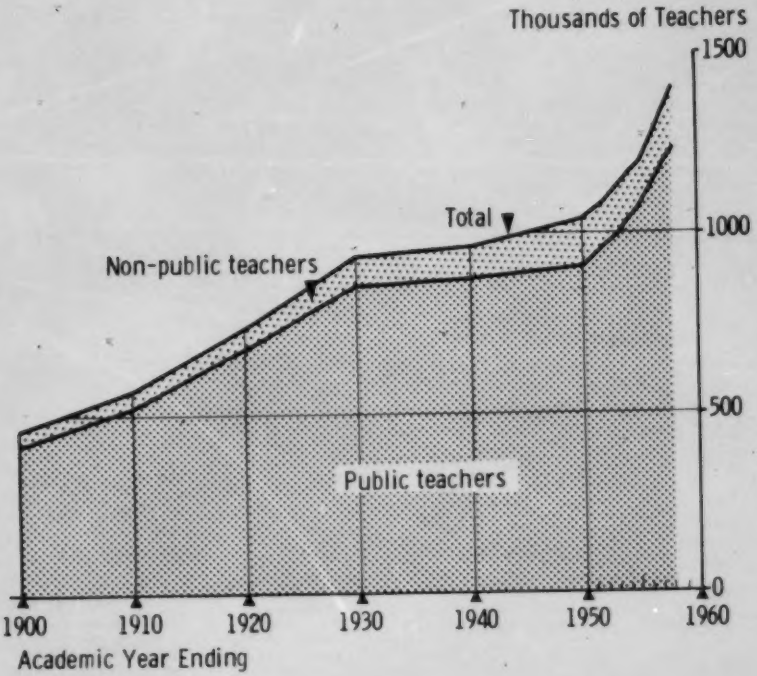


Figure 25

FACULTY IN INSTITUTIONS OF HIGHER EDUCATION

Faculties of institutions of higher education in the continental United States increased steadily to a high of nearly 350,000 in 1957–58. The single exception was in 1952 when a slight decline was reported, related to the decreased enrollments for the same period. The number of male members of the faculty, however, has increased every year. During the first 4 decades, the rate of increase was generally well over 50 percent for each decade.

[In thousands]

Academic year	Faculty members			Academic year	Faculty members		
	Total	Men	Women		Total	Men	Women
1957–58	345	267	77	1939–40	147	106	41
1955–56	299	230	69	1929–30	86	62	24
1953–54	266	205	61	1919–20	49	36	13
1951–52	244	187	57	1909–10	36	29	7
1949–50	247	186	60	1899–1900	24	19	5

SOURCE: U.S. Office of Education.

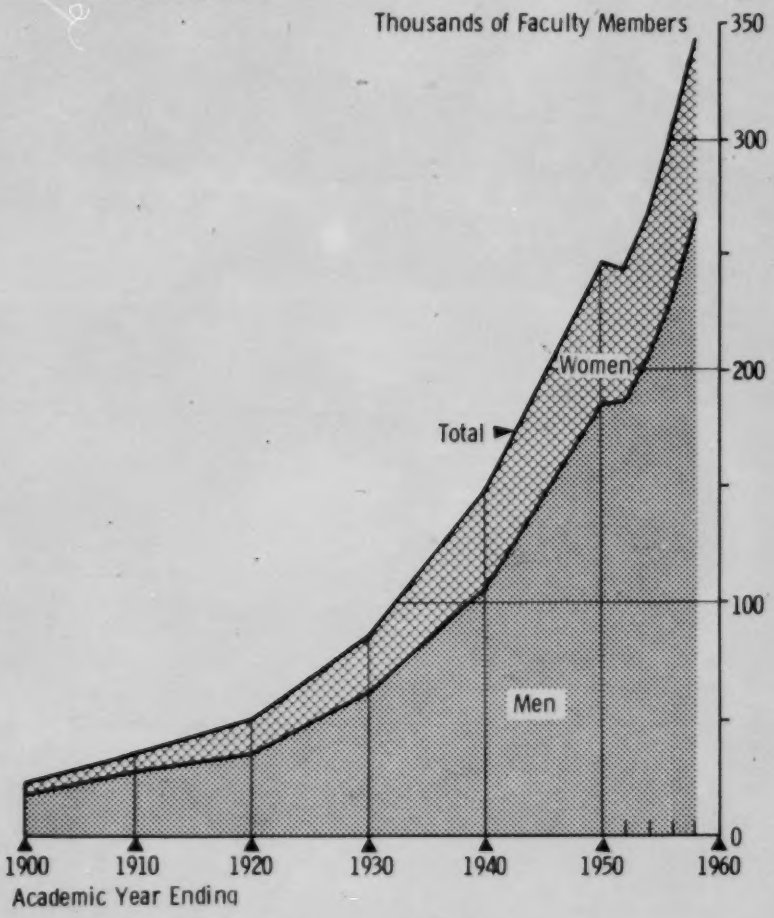


Figure 26

COLLEGE GRADUATES QUALIFIED TO TEACH IN HIGH SCHOOL: TOTAL, SCIENCE, AND MATHEMATICS

An estimate of the number of new college graduates who are prepared to teach high school courses and those prepared to teach science or mathematics courses on a secondary level are an indication of the supply of new teachers. The general trend is similar to that found for total bachelors' degrees (see figure 20). There is little difference between the rates of change for the total number completing certification standards and those completing science and mathematics certification standards.

Graduates completing standard certification requirements to teach

[In thousands]

Academic year	Total	Science	Mathematics	Academic year	Total	Science	Mathematics
1958–59	78.2	7.0	4.7	1951–52	61.5	5.2	3.1
1957–58	69.1	5.5	3.4	1950–51	73.0	7.5	4.1
1956–57	65.1	4.9	3.1	1949–50	86.9	9.1	4.6
1955–56	56.8	4.3	2.5				
1954–55	49.7	3.8	2.2	1948–49	66.9	6.3	3.7
1953–54	48.9	3.6	2.2	1947–48	43.2	3.8	2.4
1952–53	54.0	4.4	2.6				

SOURCE: National Education Association.

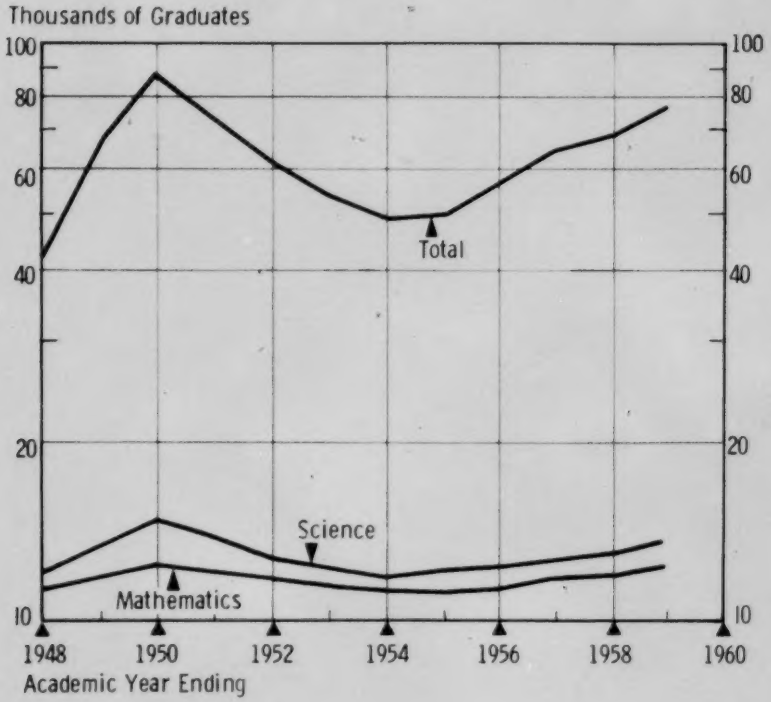


Figure 27

COLLEGE GRADUATES QUALIFIED TO TEACH HIGH SCHOOL SCIENCE AND MATHEMATICS, BY FIELD

An indication of the new supply of teachers for mathematics and specific science subjects is shown by the numbers of new graduates completing certification requirements in each field. While the overall trends exhibited by each of the scientific fields are reasonably similar, it should be noted that mathematics and general science accounted for a larger share of the total in the late 1950's; biology, chemistry, and physics, although increasing quantitatively, showed a relative decline in the proportion of the total.

Graduates completing standard certification requirements to teach

[In thousands]

Academic year	Total science and mathematics	Mathematics	General science	Biology	Chemistry	Physics
1958–59	11.7	4.7	3.5	2.3	0.8	0.3
1957–58	8.9	3.4	2.7	1.9	.6	.3
1956–57	8.0	3.1	2.5	1.7	.5	.2
1955–56	6.8	2.5	1.9	1.7	.5	.2
1954–55	6.0	2.2	1.8	1.3	.5	.2
1953–54	5.8	2.2	1.6	1.3	.5	.2
1952–53	7.0	2.6	1.7	1.7	.7	.4
1951–52	8.4	3.1	2.2	2.0	.8	.4
1950–51	11.6	4.1	2.8	2.8	1.3	.6
1949–50	13.7	4.6	3.0	3.5	1.7	1.0
1948–49	10.0	3.7	2.1	2.4	1.2	.6
1947–48	6.2	2.4	1.3	1.4	.8	.3

SOURCE: National Education Association.

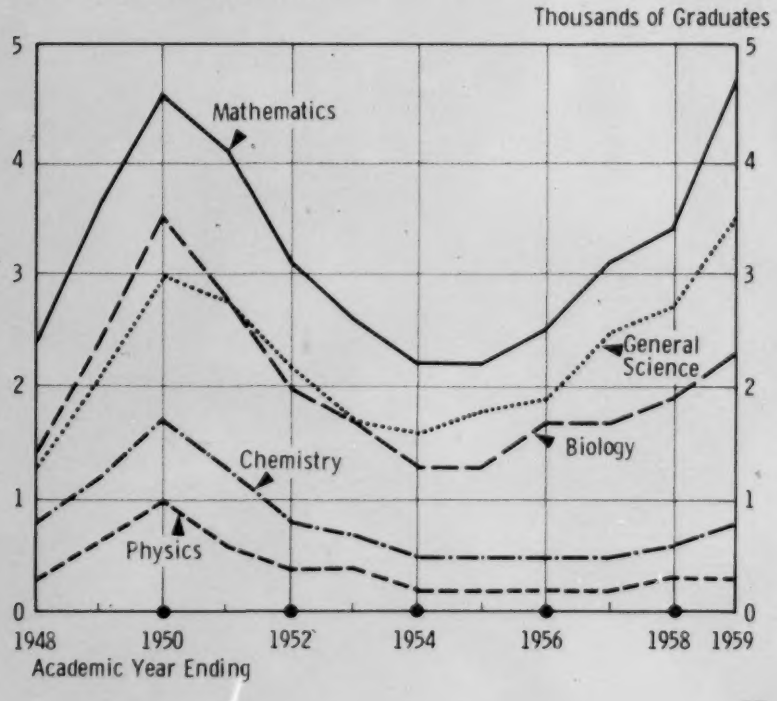


Figure 28

COLLEGE TRAINING IN SPECIALTY OF HIGH SCHOOL SCIENCE AND MATHEMATICS TEACHERS, 1957–58

In 1957–58, 40 percent of high school mathematics teachers had 30 or more semester credit hours of college mathematics; over 60 percent had 20 or more hours; 85 percent had at least 10 hours; and less than 2 percent had no college preparation for teaching mathematics. Sixty percent of all high school science teachers had 30 or more semester credit hours of science; over 75 percent had 20 or more hours; well over 90 percent had at least 10 hours of science; and less than 1 percent had no college preparation for teaching courses in science.

Semester hours of college credit in field	Percent of teachers		Semester hours of college credit in field	Percent of teachers	
	Mathematics	Science		Mathematics	Science
Total	100.0	100.0	10–19 hours	22.5	16.4
30 or more hours	40.9	60.4	1–9 hours	12.4	5.1
20–29 hours	22.7	17.8	No credit hours	1.5	.3

SOURCE: National Education Association.

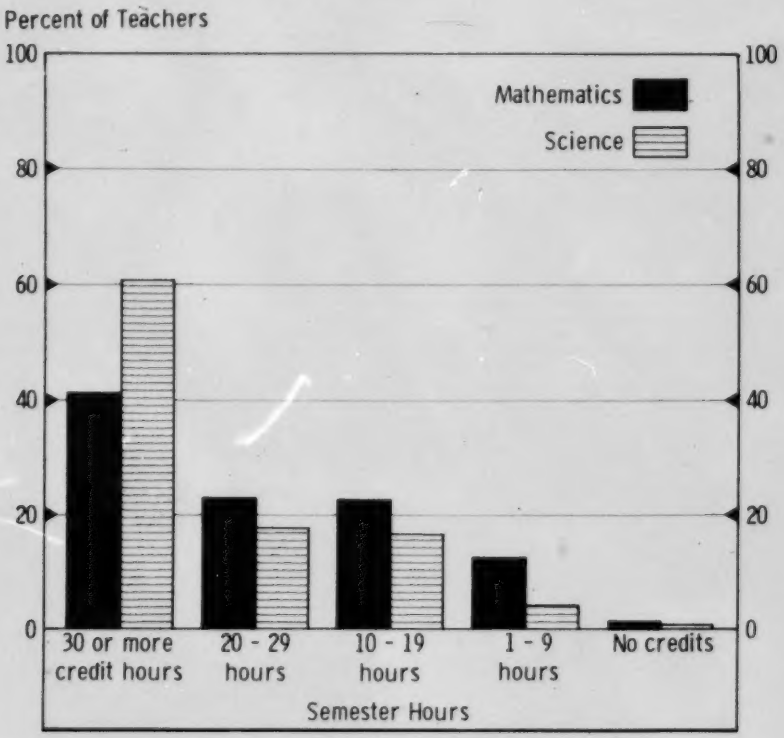


Figure 29

FACULTY IN THE SCIENCES AND THEIR RESEARCH ACTIVITIES, 1953–54

A report of the number of faculty members and the full-time equivalent employment at 987 institutions of higher education is presented below. Also included in the data is a measurement of the number engaged in and the time (full-time equivalent) spent on research activities. Slightly over half of all employed science faculty members spent some time on research and less than one-third of all faculty time was devoted to research.

[In thousands]

Field	Employed faculty		Faculty engaged in research	
	Number	Full-time equivalent	Number	Full-time equivalent
All sciences	62.3	55.1	31.5	16.5
Engineering	8.7	8.0	4.2	2.3
Physical sciences	10.2	9.5	5.1	2.6
Mathematics	4.4	4.0	1.2	.6
Life sciences (including agriculture)	25.2	21.1	16.5	9.3
Psychology	2.5	2.2	1.0	.4
Social sciences	11.2	10.3	3.5	1.3

SOURCE: National Science Foundation.

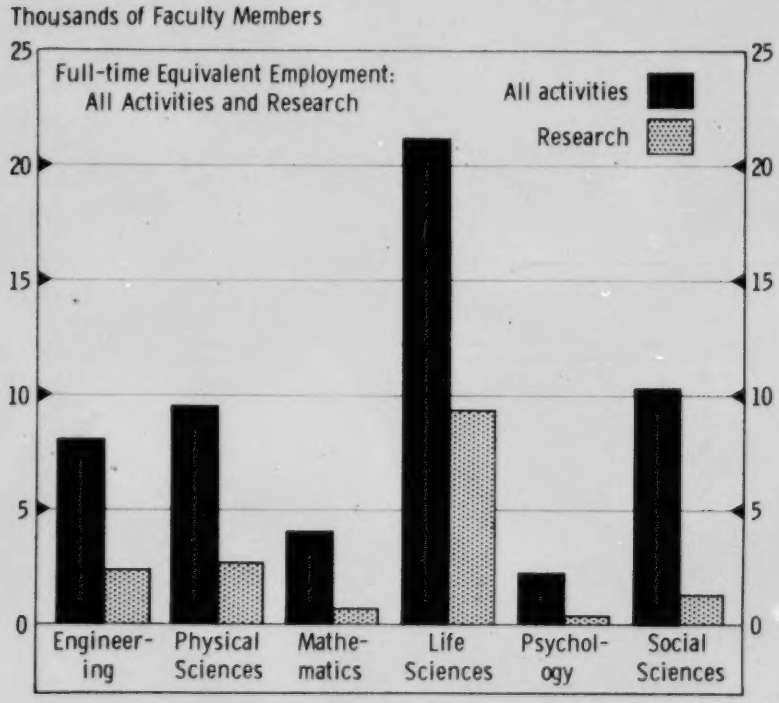


Figure 30

LEVEL OF PREPARATION OF NEW FACULTY, 1953–59

The level of academic preparation of newly employed, full-time faculty members of colleges and universities between the academic years 1953–54 and 1958–59 appear below. The total number of new faculty members is compared with new scientific faculty; the data in the chart are grouped biennially by each of the three studies in this series. Because the coverage of each of the studies varied, the data are not strictly comparable. They nevertheless indicate that the proportion of new faculty members who have earned their doctorate before becoming a member of a faculty decreased between 1953–54 and 1958–59 and that those with less than a master's degree increased.

Year and field	Number of institutions reporting data	Number of new faculty reported	Percentage distribution by level of degree held				
			All new faculty	Doctor's degree	Master's plus 1 year	Master's	Less than master's
Total new faculty:							
1958–59	936	9,100	100.0	23.8	18.7	36.7	20.8
1957–58	936	9,293	100.0	25.3	16.2	36.7	21.8
1956–57	827	8,308	100.0	23.5	18.1	35.3	23.1
1955–56	827	6,337	100.0	26.7	17.8	35.4	20.1
1954–55	656	4,694	100.0	28.4	18.7	33.6	19.3
1953–54	656	4,232	100.0	31.4	18.2	32.2	18.2
New science faculty:							
1958–59	936	3,452	100.0	32.2	13.4	30.0	24.4
1957–58	936	3,617	100.0	32.7	11.4	28.4	27.5
1956–57	827	3,137	100.0	30.6	11.7	26.9	30.8
1955–56	827	2,346	100.0	34.7	12.3	26.2	26.8
1954–55	656	1,786	100.0	36.4	13.2	27.0	23.4
1953–54	656	1,545	100.0	40.3	13.9	24.7	21.1

SOURCE: National Education Association.

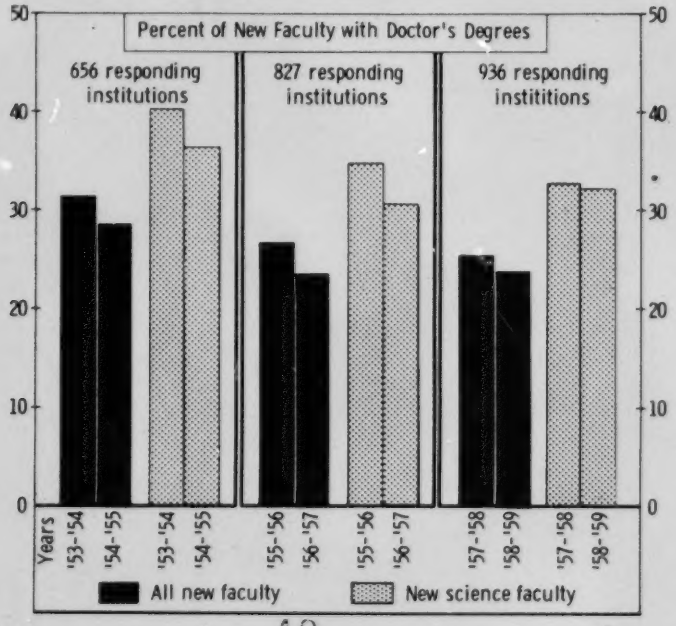


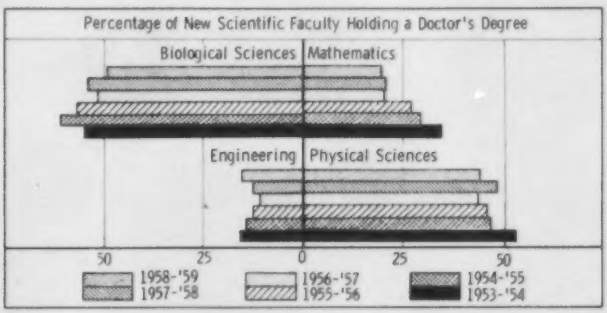
Figure 31

LEVEL OF PREPARATION OF NEW SCIENTIFIC FACULTY, 1953–59: BY SELECTED FIELDS

The percentage distribution of the level of preparation of new faculty in selected science fields between the academic years 1953–54 and 1958–59 is presented below. The data are grouped biennially by each of the three studies in the series; the chart presents each science field as a group by year and biennially. Inspection of the data below indicates a more erratic pattern than shown when all new faculty and all new science faculty members were aggregated on the preceding figure. This greater fluctuation suggests that additional factors influence the qualifications of new entrants into the academic profession, i.e., college enrollments, graduates, salary scales, etc.

Field	Percentage distribution by level of degree held				
	Total	Doctor's degree	Master's plus 1 year	Master's	Less than master's
1958–59					
Biological sciences	100.0	49.0	16.0	26.1	8.9
Engineering	100.0	15.8	9.7	31.6	42.9
Mathematics	100.0	19.9	16.3	43.2	20.6
Physical sciences	100.0	44.3	16.8	21.7	17.2
1957–58					
Biological sciences	100.0	53.6	14.7	19.3	12.4
Engineering	100.0	13.2	8.3	27.3	51.2
Mathematics	100.0	20.7	15.5	42.9	20.9
Physical sciences	100.0	48.5	13.6	24.0	13.9
1956–57					
Biological sciences	100.0	51.2	15.2	23.7	9.9
Engineering	100.0	11.1	6.9	27.2	54.8
Mathematics	100.0	20.5	17.0	35.5	27.0
Physical sciences	100.0	43.7	14.3	23.6	18.4
1955–56					
Biological sciences	100.0	56.5	13.5	20.3	9.7
Engineering	100.0	12.9	9.2	26.6	51.3
Mathematics	100.0	27.3	18.4	35.5	18.8
Physical sciences	100.0	46.3	15.8	21.9	16.0
1954–55					
Biological sciences	100.0	60.1	14.1	17.2	8.6
Engineering	100.0	14.4	7.7	34.7	43.2
Mathematics	100.0	29.3	22.1	35.6	13.0
Physical sciences	100.0	46.9	15.7	26.6	10.8
1953–54					
Biological sciences	100.0	54.5	17.2	22.7	5.6
Engineering	100.0	15.9	9.6	29.0	45.5
Mathematics	100.0	34.2	20.2	37.3	8.3
Physical sciences	100.0	53.0	14.0	19.0	14.0

SOURCE: National Education Association.



Part II

RELATED INSTITUTIONAL, FACILITY, AND FINANCIAL DATA

Figure 32

NUMBER OF ELEMENTARY AND SECONDARY SCHOOLS: PUBLIC AND PRIVATE

Since 1930 the total number of elementary and secondary schools, including both public and private schools, has decreased by more than 45 percent—a decrease accompanied by an increase in enrollments of about 30 percent. The distribution of schools by type of control show that the number of public schools decreased by more than one-half, whereas private schools increased by one-third. The distribution of schools by level indicates that the elementary schools decreased by about 50 percent and secondary schools increased by more than 10 percent.

[In thousands]

School year	Total number of schools	Type of control		Level	
		Public	Private	Elementary	Secondary
1955–56	146	130	16	116	30
1953–54	149	137	16	123	30
1951–52	162	148	14	135	27
1949–50	167	153	14	138	28
1930–40	238	223	15	209	29
1929–30	274	262	12	247	27

SOURCE: U.S. Office of Education.

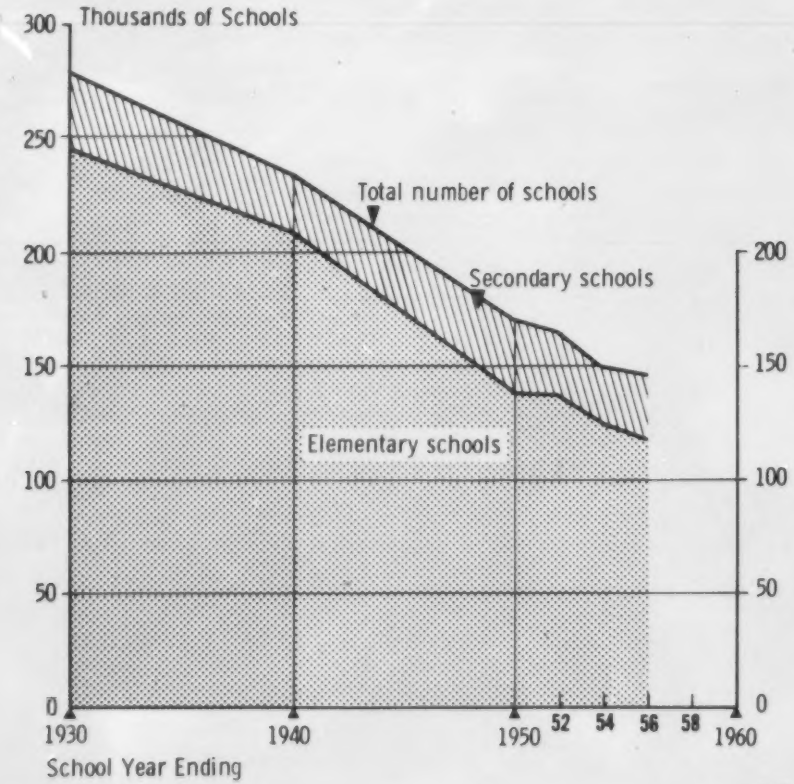


Figure 33

NUMBER OF PUBLIC SCHOOLS

The major reason for the decline in the number of elementary public schools is the consolidation of "one-teacher" elementary schools and the consolidation of public school districts. Elementary one-teacher schools declined in numbers between 1930 and 1956 by more than 100,000, a decrease of about 80 percent. Similarly the number of public school districts declined by nearly 75,000, a decrease of almost 60 percent.

[In thousands]

School year	Number of schools				Number of Public school districts
	Total	Elementary	Secondary	One-teacher elementary school	
1955–56	130	104	26	35	55
1953–54	137	111	26	43	63
1951–52	148	124	24	51	71
1949–50	153	128	25	60	84
1939–40	223	198	25	114	117
1929–30	262	238	24	149	127

SOURCE: U.S. Office of Education.

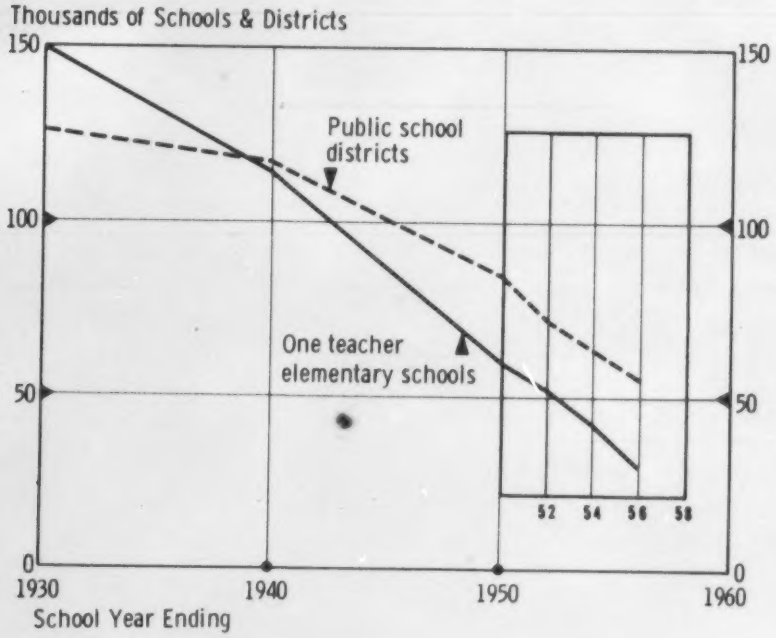


Figure 34

NUMBER OF INSTITUTIONS OF HIGHER EDUCATION, 1958–59

Nearly 2,000 institutions of higher education were listed by the Office of Education for the academic year 1958–59. About 30 percent offered less than a 4-year program leading to a bachelor's degree. Less than one-third offered programs leading to a graduate degree. There were twice as many private institutions as those under public control. However, enrollments in 1958–59 show that nearly 60 percent of all students were in publicly controlled institutions.

Highest level of offering	Number of institutions			Highest level of offering	Number of institutions		
	Total	Control			Total	Control	
		Public	Private			Public	Private
Total	1,957	677	1,280	Bachelor's degree	720	112	608
Junior college	557	309	248	Graduate degree	646	250	396
				Other	34	6	28

Source: U.S. Office of Education.

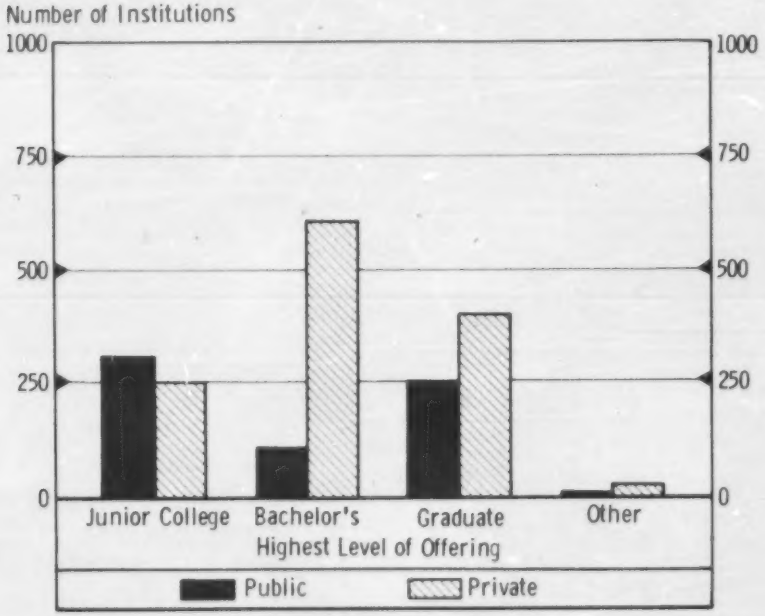


Figure 35

SCIENCE AND MATHEMATICS OFFERINGS IN PUBLIC HIGH SCHOOLS, 1955–56

Well over 50 percent of all public high schools offer the standard science and mathematics courses listed below, except for solid geometry and plane trigonometry generally combined in a 1-year sequence. Over 90 percent of the schools offer at least one science and one mathematics course. Those schools not offering advanced science and mathematics courses were the smaller schools, frequently having an enrollment of about 100.

Courses	All schools	Percent of all public high schools offering selected science and mathematics courses			
		Regular four-year high school	Senior high school	Junior-senior high school	Undivided high school
General science	85.3	85.1	89.7	83.8	79.8
Biology	90.3	87.7	97.1	94.4	87.0
Chemistry	63.8	56.8	92.5	70.7	54.4
Physics	56.8	47.9	91.9	65.6	45.4
Elementary algebra	91.9	91.3	----------	95.5	92.5
Plane geometry	81.2	75.2	97.7	88.3	76.6
Intermediate algebra	63.3	55.2	89.0	70.0	59.0
Solid geometry	27.2	18.5	59.0	34.4	19.3
Plane trigonometry	33.4	24.1	58.4	46.1	24.5

SOURCE: U.S. Office of Education.

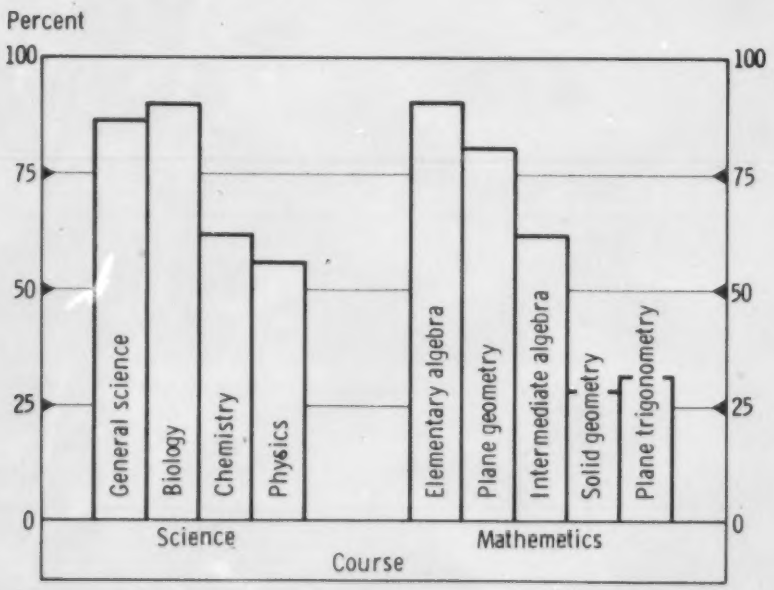


Figure 36

NUMBER OF COLLEGES AND UNIVERSITIES AWARDING SCIENTIFIC DEGREES, 1957–58

A large number of the Nation's colleges and universities offer training in science or engineering which leads to the granting of academic degrees in these fields. In the academic year 1957–58 about one-thousand (1,009) institutions awarded at least one science or engineering degree: 1,002 gave a bachelor's degree; 292, a master's; and 130, a doctorate. Over 800 institutions awarded degrees in each of the three fields—physical sciences, biological sciences, and mathematics.

Field	Number of institutions awarding degrees at—			
	Any level	Bachelor's	Master's	Doctor's
Any natural science field	1,009	1,002	292	130
Agricultural sciences	117	117	56	27
Biological sciences	881	875	190	99
Engineering	223	220	135	60
Mathematics	835	828	171	60
Physical sciences	862	861	221	100
Psychology	499	492	162	72

SOURCE: U.S. Office of Education.

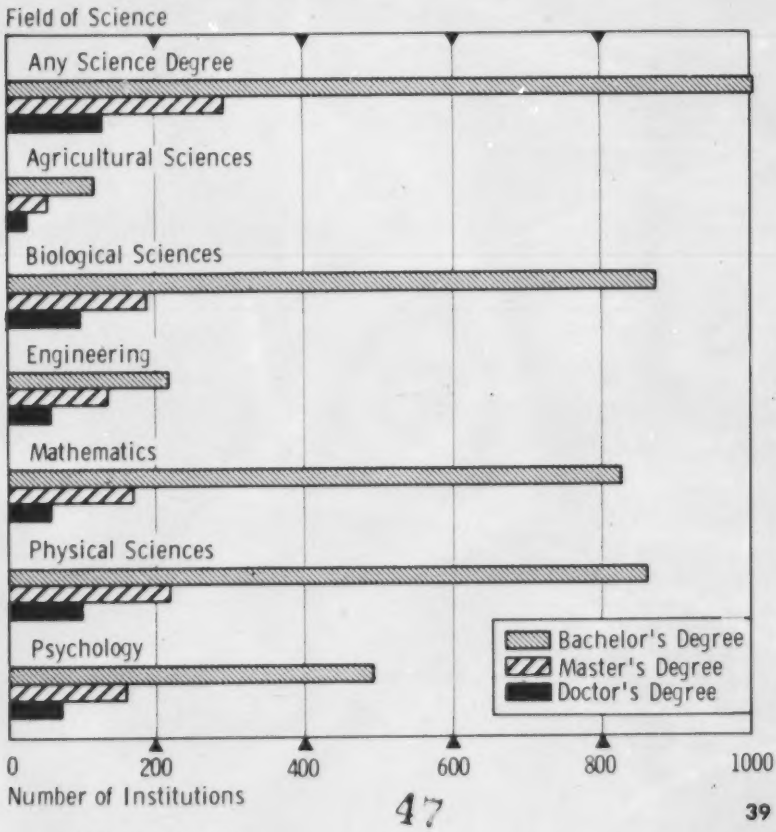


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Figure 37

VALUE OF EDUCATIONAL PROPERTY

Between 1900 and 1956 the total value, in unadjusted dollars, of property controlled or owned by educational institutions increased fourfold. The growth in elementary and secondary school property has been most rapid during the 1950's. By the time the anticipated college enrollment of the sixty's and seventy's are in college, the rate of growth for value of property at institutions of higher education should exceed that of elementary and secondary schools.

Value of property

[Millions]

Academic year	Total	Public elementary and secondary schools	Institutions of higher education	Academic year	Total	Public elementary and secondary schools	Institutions of higher education
1955–56	$32,784	$23,882	$8,902	1929–30	$8,136	$6,211	$1,925
1953–54	24,995	17,000	7,995	1919–20	3,151	2,410	741
1951–52	20,711	13,955	6,756	1909–10	1,552	1,091	461
1949–50	16,669	11,397	5,272	1899–1900	804	550	254
1939–40	10,389	7,635	2,754				

SOURCE: U.S. Office of Education.

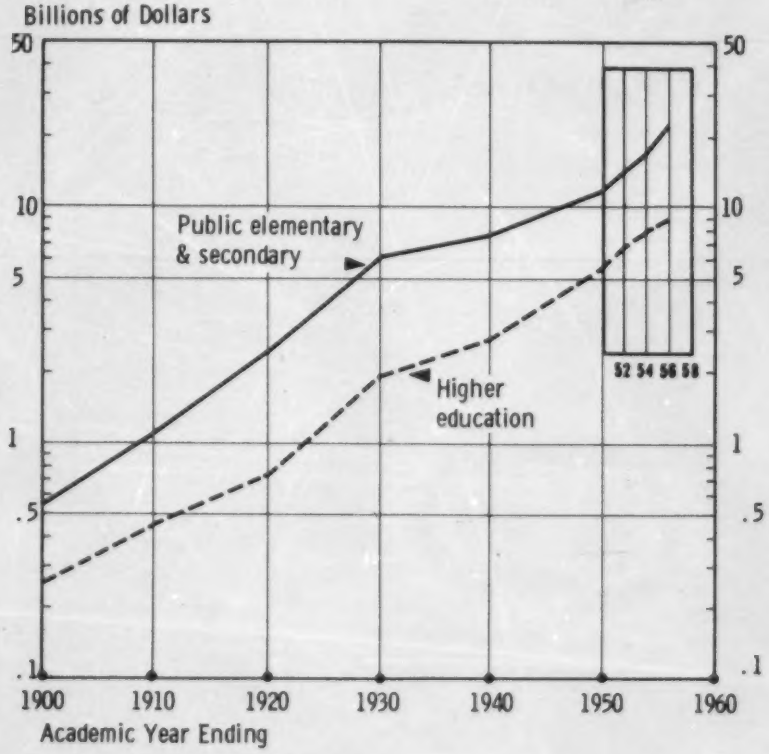


Figure 38

COST OF TOTAL EDUCATIONAL CONSTRUCTION

The cost of educational construction has increased markedly since 1920, both in actual dollars and in dollars adjusted to a 1947–49 base. Construction under private auspices has grown at a somewhat more erratic rate than is true for publicly sponsored construction.

[Millions]

Calendar year	Cost of construction			
	Current dollars			Total in 1947–49 dollars
	Total	Public	Private	
1957	$3,350	$2,825	$525	$2,277
1956	3,085	2,549	536	2,176
1955	2,934	2,442	492	2,172
1954	2,663	2,134	529	2,031
1953	2,140	1,714	426	1,663
1952	1,970	1,619	351	1,591
1951	1,858	1,513	345	1,561
1950	1,427	1,133	294	1,289
1940	206	156	50	359
1930	482	364	118	913
1920	212	190	22	349

SOURCE: U.S. Departments of Health, Education, and Welfare, Labor and Commerce.

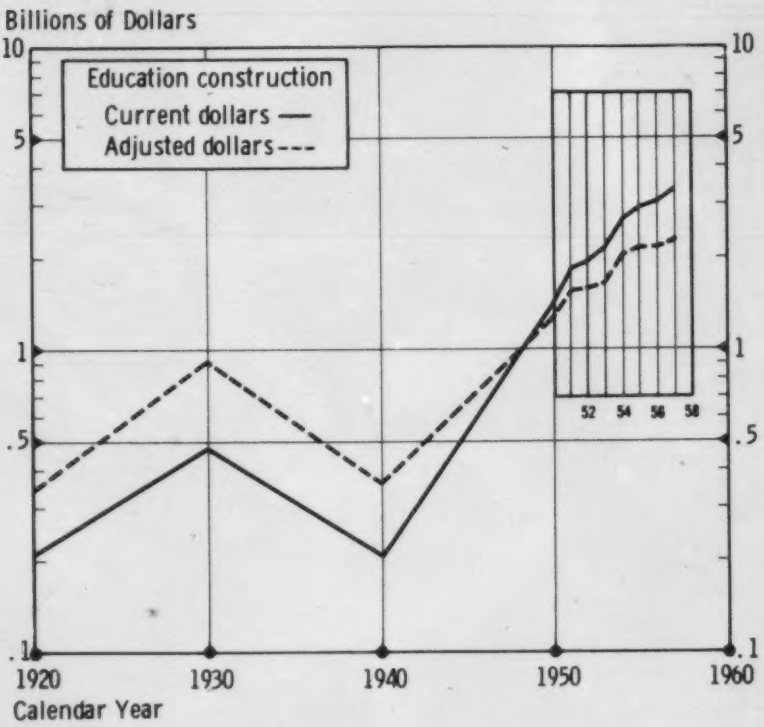


Figure 39

COST OF EDUCATIONAL PLANT EXPANSION AND CAPITAL OUTLAY

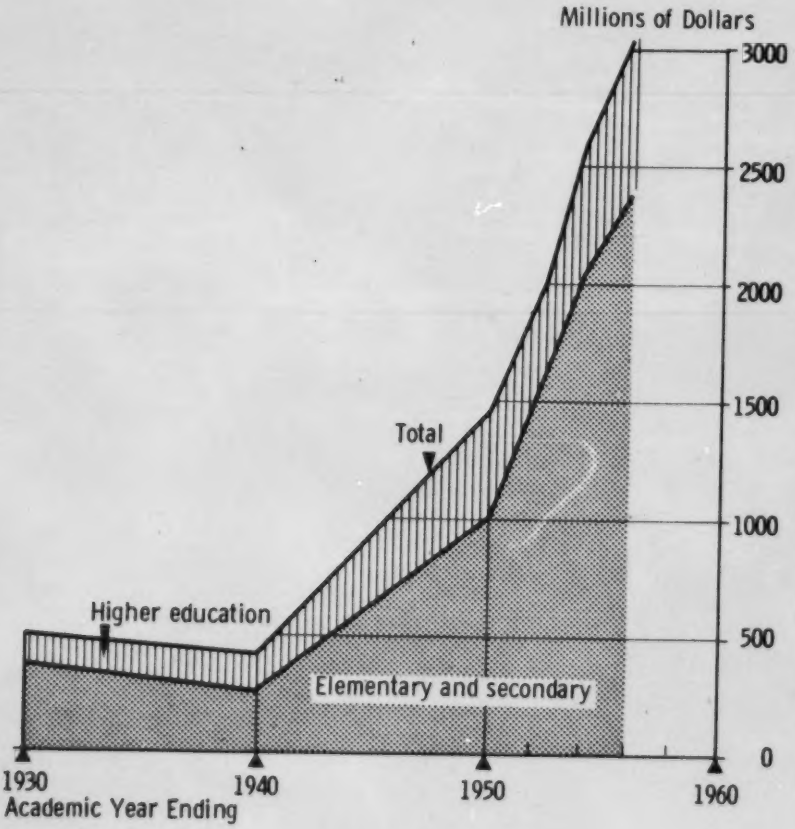
The proportion of total expenditures by educational institutions for plant expansion or capital outlay accounted for by elementary and secondary schools varied between 70 and 80 percent during the period 1929–30 to 1955–56. Except for a decrease in expenditures between 1930 and 1940, the total has risen for both elementary and secondary education and higher education.

Expenditures for plant expansion and capital outlay

[In millions]

Academic year	Total	Public elementary and secondary schools	Institutions of higher education	Academic year	Total	Public elementary and secondary schools	Institutions of higher education
1955–56	$3,035	$2,387	$648	1939–40	$342	$258	$84
1953–54	2,588	2,055	533	1929–30	496	371	125
1951–52	1,881	1,477	403				
1949–50	1,431	1,014	417				

SOURCE: U.S. Office of Education.



42

Figure 40

ENDOWMENTS AT INSTITUTIONS OF HIGHER EDUCATION

The trend in total endowment holdings of institutions of higher education from 1900 to 1956 has been upward. In 1930 privately controlled institutions accounted for 97 percent of total endowments; by 1956 this proportion had decreased by 17 percent to 80 percent of total funds. Between 1900 and 1930 total endowments increased by more than 700 percent; between 1930 and 1956 by about 180 percent.

[In millions]

Academic year	Endowment holdings			Academic year	Endowment holdings		
	Total	Public	Private		Total	Public	Private
1955–56	$3,837	$760	$3,077	1939–40	$1,765	$219	$1,546
1953–54	3,313	627	2,686	1929–30	1,372	135	1,237
1951–52	2,990	545	2,445	1919–20	569	.....	.....
1949–50	2,644	413	2,231	1909–10	259	.....	.....
				1899–1915	166	.....	.....

SOURCE: U.S. Office of Education.

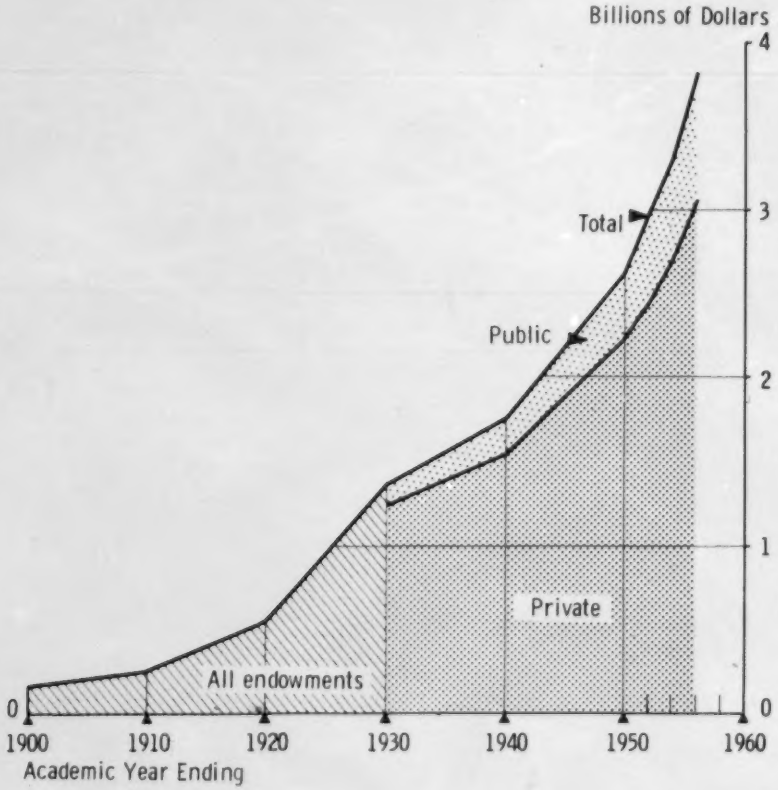


Figure 41

TOTAL EXPENDITURES IN THE EDUCATIONAL SYSTEM

Total expenditures for all educational institutions rose from approximately $1.5 billion in 1920 to an estimated $19.8 billion in 1958, a thirteen-fold increase in this period, publicly controlled institutions at all levels generally expended around 80 percent of the funds. Higher educational institutions reported between 20 and 30 percent of the total expenditures.

Educational expenditures

[In millions]

Academic year	All levels			Elementary and secondary		Institutions of higher education	
	Total	Public	Private	Public	Private	Public	Private
1957–58	$19,763	$15,697	$4,066	$12,954	$2,113	$2,743	$1,953
1955–56	16,933	13,327	3,606	10,979	1,774	2,348	1,832
1953–54	13,950	11,084	2,866	9,172	1,364	1,912	1,502
1951–52	11,312	8,967	2,345	7,402	1,036	1,565	1,309
1949–50	9,335	7,312	2,023	5,883	790	1,430	1,233
1939–40	3,352	2,756	597	2,364	230	392	367
1929–30	3,234	2,655	578	2,366	235	289	343
1919–20	.....	1,156	.....	1,040	.....	116	151

SOURCE: U.S. Office of Education.

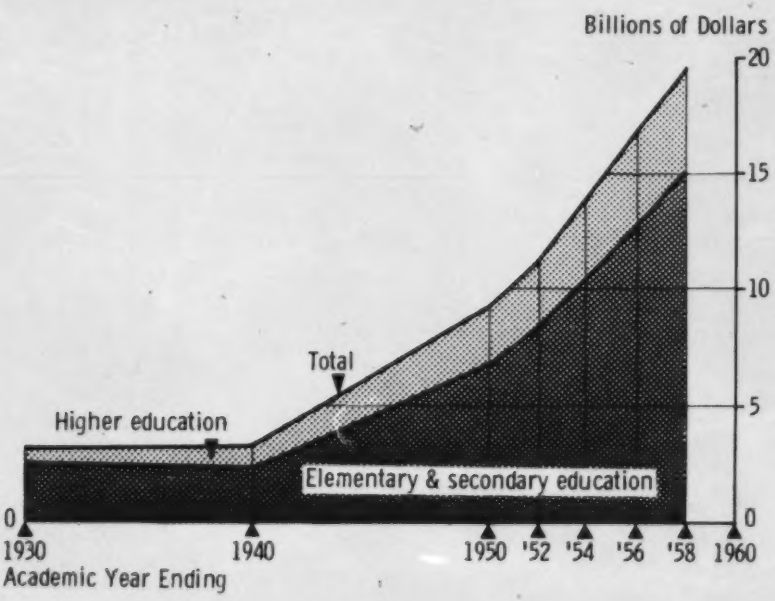


Figure 42

RECEIPTS OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

Over half of the receipts of public elementary and secondary schools have come from intermediate and local taxes and appropriations. State taxes and appropriations have generally provided between 35 and 40 percent of their receipts and all other sources have provided less than 10 percent of all receipts.

[In millions]

School year	Source of receipts of schools			
	Total	State government	Intermediate and local government	All other
1955–56	$9,687	$3,700	$5,117	$870
1953–54	7,867	2,790	4,337	740
1951–52	6,424	2,400	3,513	511
1949–50	5,437	2,123	2,900	414
1939–40	2,260	659	1,490	111
1929–30	2,089	329	1,646	114
1919–20	970	134	759	77
1909–10	433	65	312	56
1899–1900	220	38	149	32

SOURCE: U.S. Office of Education.

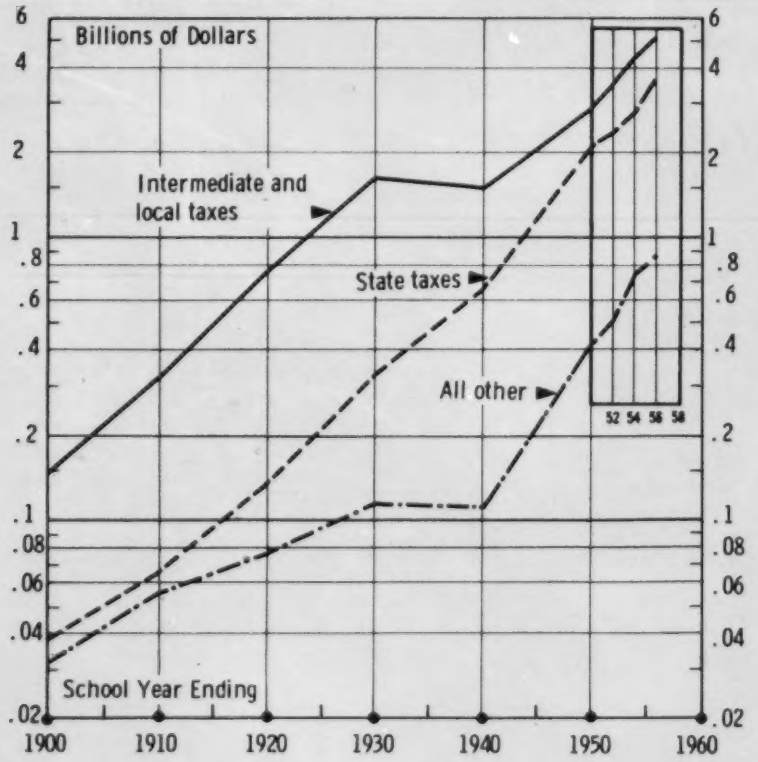


Figure 43

EXPENDITURES OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

Two-thirds or more of the annual expenditures of public elementary and secondary schools have been spent on current expenses for day schools; i.e., current operating costs. Capital outlay for construction, equipment, and major renovation accounted for about 15 percent of the total through 1952 and rose to over 20 percent in 1956. Prior to 1950 interest never accounted for as much as 6 percent of the total expenditures; it was less than 2 percent from 1950 through 1956.

Type of expenditures

[In millions]

School year	Total	Current expenses for day schools	Capital outlay	Interest	Other
1955–56	$10,955	$8,251	$2,387	$216	$101
1953–54	9,092	6,791	2,055	154	92
1951–52	7,344	5,722	1,477	114	31
1949–50	5,838	4,687	1,014	101	36
1939–40	2,344	1,942	258	131	13
1929–30	2,317	1,844	371	92	10
1919–20	1,036	861	154	18	3
1909–10	426	356	70	.....	.....
1899–1900	215	180	35	.....	.....

SOURCE: U.S. Office of Education.

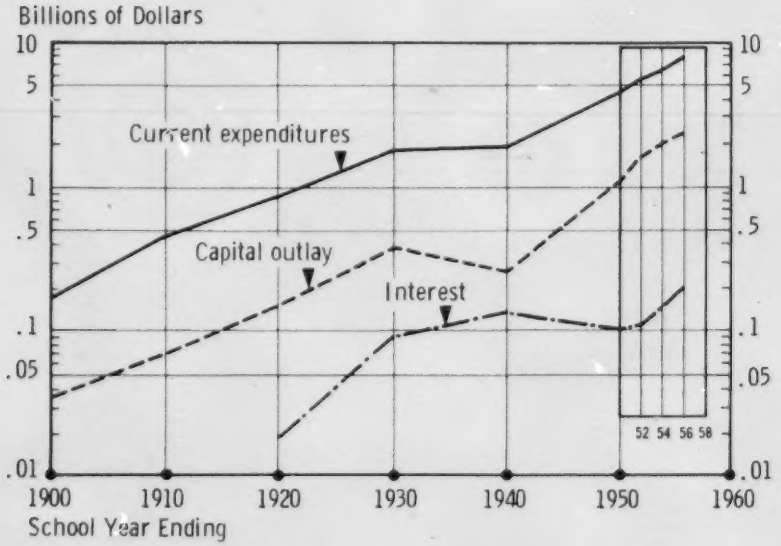


Figure 44

CURRENT INCOME OF INSTITUTIONS OF HIGHER EDUCATION

State, local, and Federal Governments have provided approximately 40 percent of the total current income of institutions of higher education. Student fees provided an increasing proportion of total income from 1950 through 1956 when almost 20 percent of the money received was from student fees; in 1950 it was slightly more than 15 percent—a ratio which has increased through 1956.

Current income

[In millions]

Academic year	Total	Educational and general			Auxiliary enterprises, etc.
		Student fees	Government	Other	
1955–56	$3,629	$672	$1,492	$664	$746
1953–54	2,966	554	1,259	543	610
1951–52	2,562	447	1,134	440	542
1949–50	2,375	395	1,078	362	541
1939–40	715	201	214	156	144
1929–30	555	144	172	167	71
1919–20	200	42	75	56	27
1909–10	77	18	26	24	9

SOURCE: U.S. Office of Education.

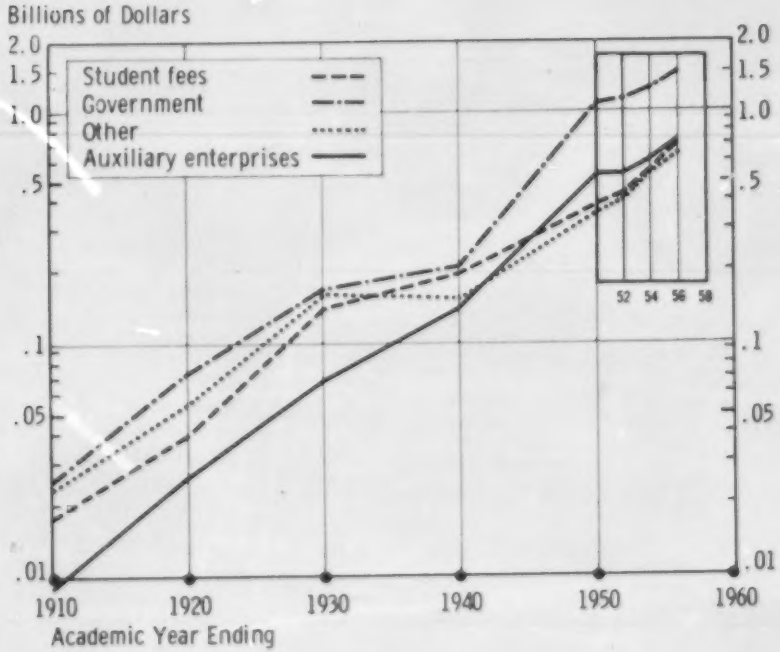


Figure 45

TOTAL INCOME OF INSTITUTIONS OF HIGHER EDUCATION

As with current income, total income of institutions of higher education has increased each year over the last few decades. Funds received as current income comprise between 80 and 90 percent of the total income of higher educational institutions. All other income is for plant expansion or increase of endowment.

Types of income

[Millions]

Academic year	Total	Current income		Receipts for plant expansion	Private gifts and grants for fund increase
		Educational and general	Other current income		
1955–56	$4,209	$2,882	$747	$437	$143
1953–54	3,365	2,356	610	292	107
1951–52	3,014	2,021	542	355	96
1949–50	2,971	1,834	541	529	67
1939–40	826	571	144	66	45
1929–30	700	483	71	82	64

SOURCE: U.S. Office of Education.

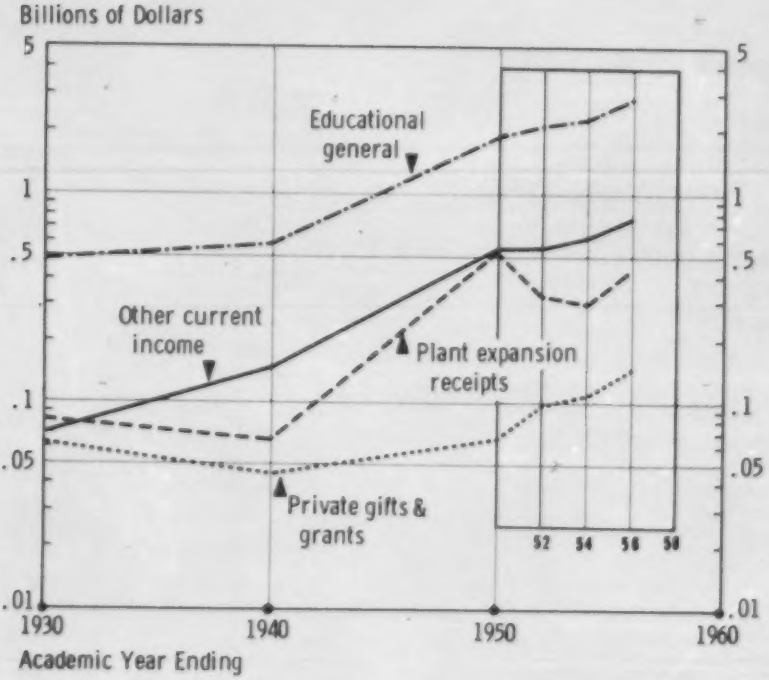


Figure 46

TOTAL EXPENDITURES OF INSTITUTIONS OF HIGHER EDUCATION

In 1956 total expenditures by institutions of higher education were more than $4 billion. This was more than a 600 percent increase over the total expenditures reported in 1930. Less than 20 percent of expenditures for the entire period covered were for plant expansion. Organized research, as an absolute figure and as a proportion of the total displays the greatest amount of increase. It increased, steadily, from 3 percent of total expenditures in 1930 to 12 percent of total expenditures in 1956.

Expenditures

[In millions]

Academic year	Total	Current expenditures			Expenditures for plant expansion
		Resident instruction	Organized research	Other current expenditures	
1955–56	$4,172	$1,149	$506	$1,870	$648
1953–54	3,436	967	375	1,561	533
1951–52	2,874	823	318	1,330	403
1949–50	2,662	781	225	1,239	417
1939–40	758	280	27	367	84
1929–30	632	221	18	268	125

SOURCE: U.S. Office of Education.

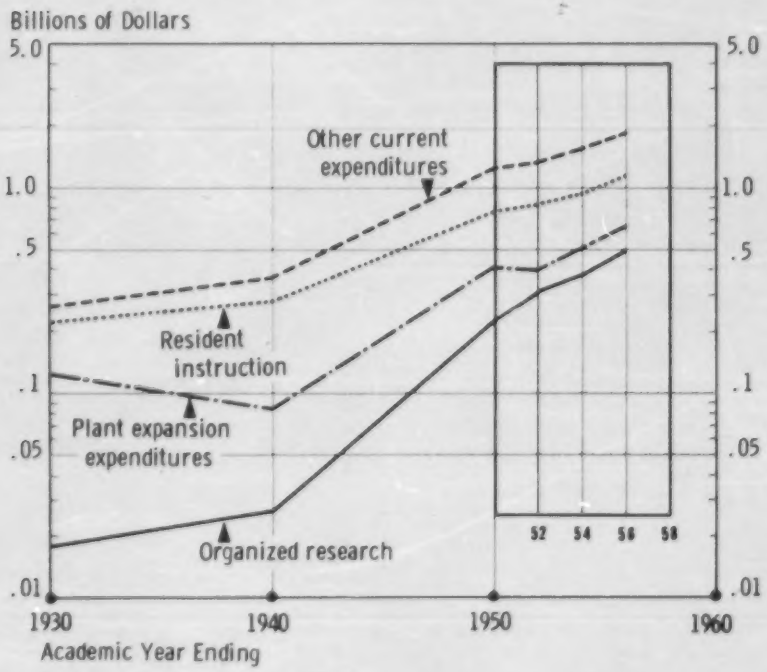


Figure 47

COST PER STUDENT IN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

The national average for annual current expenditure per pupil in average daily attendance increased from more than $100 per student in 1940 to over $300 in 1956. In general, the annual costs varies directly with the population size of the cities surveyed. In 1956 the average expenditure for cities of over 100,000 population was $329 and only $268 in cities with less than 5,000 population.

Cost per student

School year	Size of cities					
	Total	Over 100,000	25,000–99,999	10,000–24,999	5,000–9,999	2,500–4,999
1955–56	$304	$329	$305	$286	$275	$268
1953–54	277	302	277	260	247	242
1951–52	256	282	258	235	225	221
1949–50	224	248	229	205	194	193
1939–40	107	127	102	87	80	80
1929–30	.....	119	98	86	.....	.....
1919–20	.....	76	71	66	.....	.....

SOURCE: U.S. Office of Education.

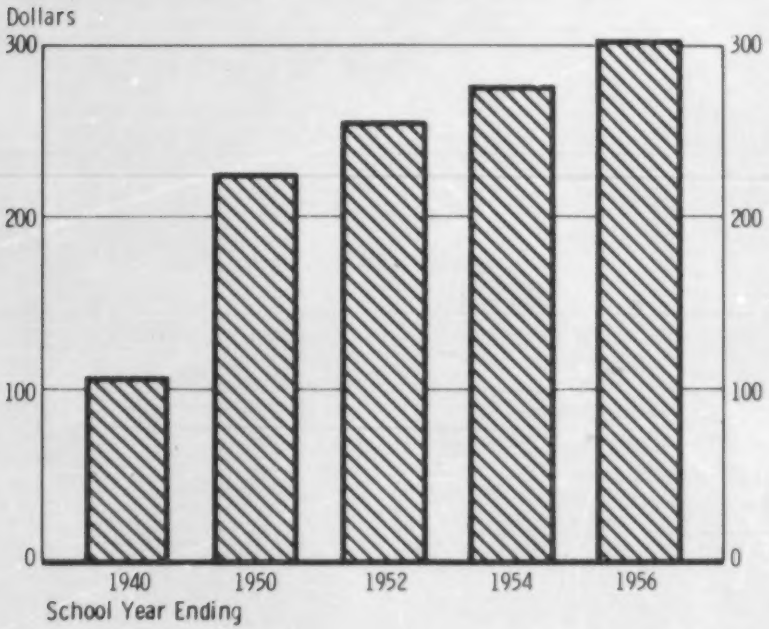


Figure 48

TUITION COSTS OF COLLEGE UNDERGRADUATES

In less than 2 decades the annual cost of undergraduate tuition has increased by more than 130 percent for all institutions. Between 1940 and 1959 the cost of tuition increased 165 percent at public institutions and about 130 percent at private colleges and universities. However, the tuition costs at private schools are about four times as large as in public institutions.

Academic year	Cost of tuition			Academic year	Cost of tuition		
	All institutions	Public	Private		All institutions	Public	Private
1958–59	$385	$155	$766	1949–50	$249	$109	$498
1957–58	355	146	681	1939–40	165	70	328
1954–55	305	132	599				

SOURCE: U.S. Office of Education.

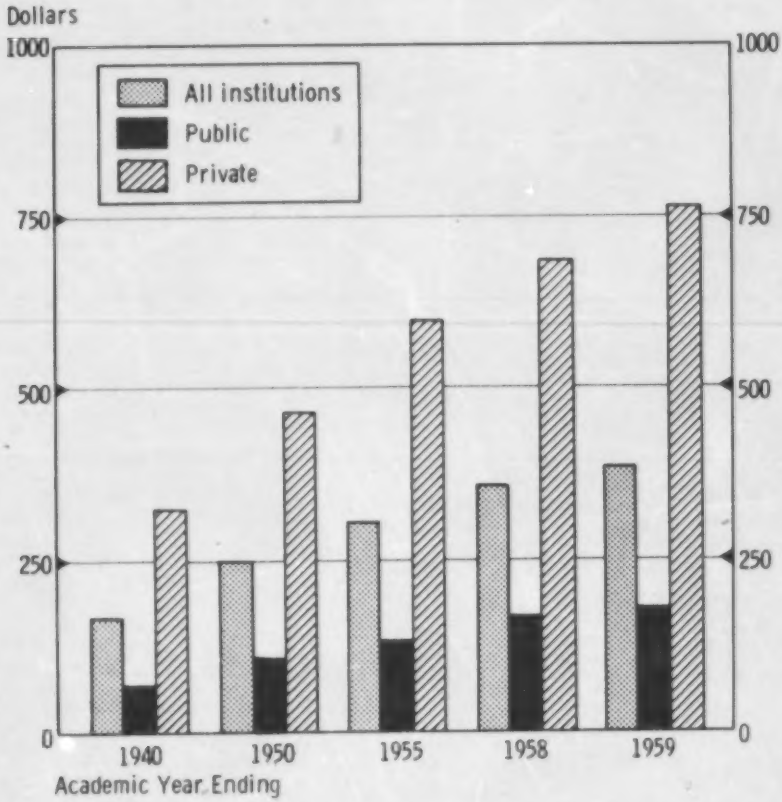


Figure 49

ANNUAL COST TO STUDENT OF UNDERGRADUATE COLLEGE ATTENDANCE

The average annual cost to undergraduate students attending institutions of higher education doubled between 1940 and 1957. Primarily because of higher tuition fees, the cost of attending private schools is about one-third higher than for public institutions.

Academic year	Cost of undergraduate college attendance			
	Private	Percent increase over 1940	Public	Percent increase over 1940
1956–57	$2,047	98	$1,493	100
1952–53	1,847	81	1,293	73
1939–40	1,023		747	

SOURCE: U.S. Office of Education.

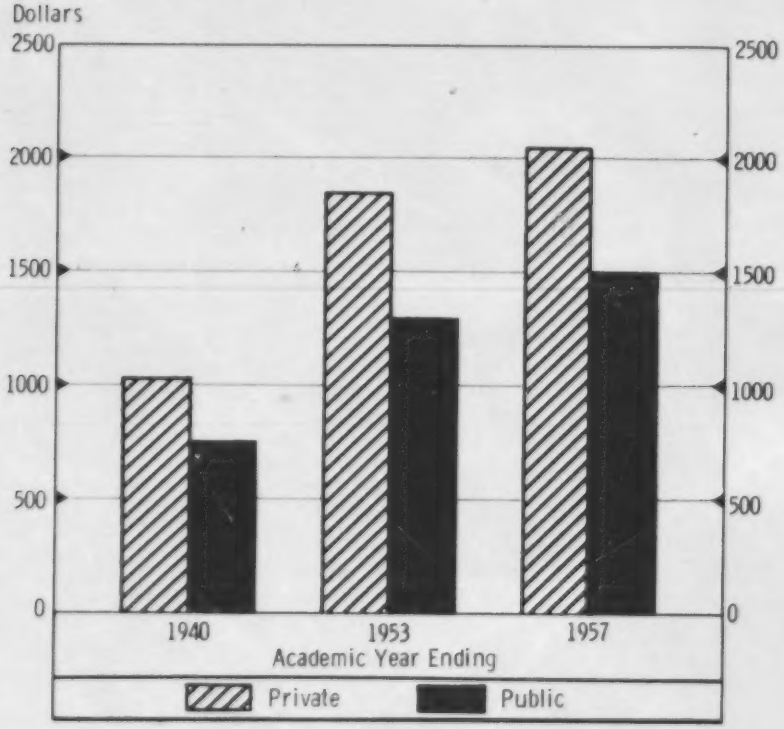


Figure 50

INSTITUTIONAL AID TO STUDENTS, 1955–56

In academic year 1955–56, nearly 700,000 students received some form of assistance from their parent institution, amounting to a total value of more than $202 million. The preponderance of support, as well as number of students aided, was at the undergraduate level. It is significant that although only about one-third of the graduate students aided held institutional assistantships they received about two-thirds of institutional funds going to graduate students.

	Type of aid				Type of aid		
	Fellowships	Assistantships	Loans		Fellowships	Assistantships	Loans
Number of students aided:		(*Thousands*)		Dollar amount received:		(*Millions*)	
Total	262	318	108	Total	$84	$101	$17
Undergraduate	237	288	77	Undergraduate	66	66	12
Graduate	25	29	31	Graduate	18	35	5

SOURCE: U.S. Office of Education.

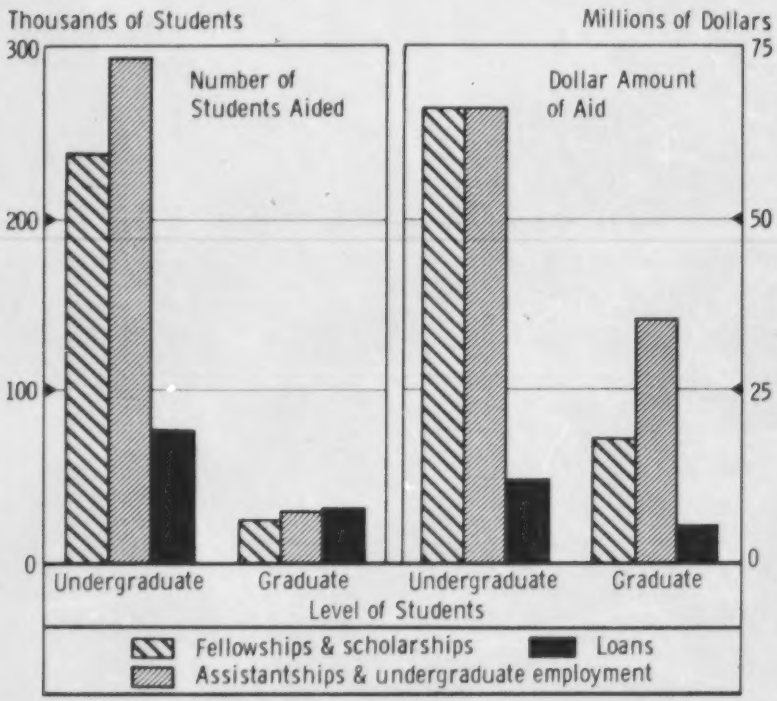


Figure 51

FEDERAL AID TO STUDENTS, 1953–54

In 1953–54 nearly 400,000 students in institutions of higher education received some form of financial assistance from the Federal Government; the overwhelming majority were receiving veteran's benefits. More than 10 percent were graduate students. Over two-thirds of the students receiving aid were in non-science fields. Of those supported in the sciences over one-half were in engineering although at the graduate level the majority of science students were enrolled in the physical and mathematical sciences.

[In thousands]

Field	Number of students			Field	Number of students		
	Total [1]	Undergraduate	Graduate		Total [1]	Undergraduate	Graduate
All fields	389	345	44	Life sciences (incl. psychology)	21	17	4
Engineering	55	49	6	Social sciences	8	6	2
Physical sciences and mathematics	17	10	7	All other fields	288	263	44

[1] Total includes less than 1,500 post doctoral fellows.

SOURCE: National Science Foundation.

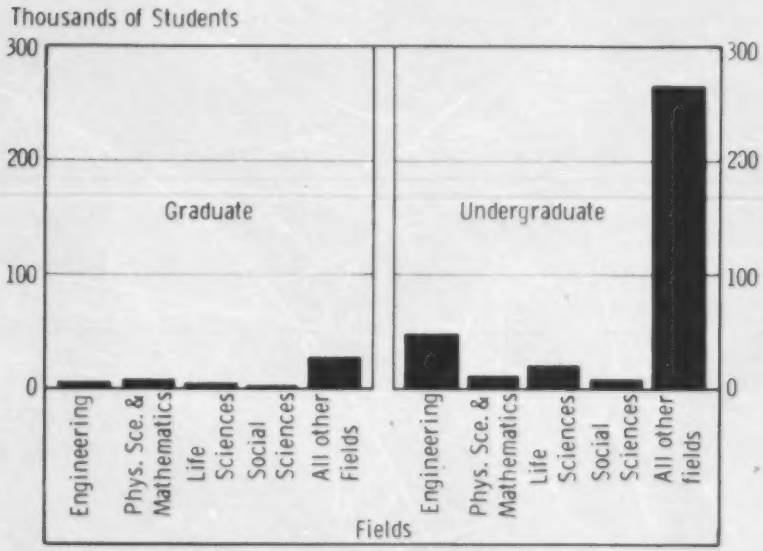


Figure 52

NUMBER OF GRADUATE STUDENTS SUPPORTED, 1953–54: LEVEL AND FIELD

Nearly two-thirds of all graduate students receiving support in 1953–54 were in the sciences and two-thirds of the science students were enrolled in the advanced years. The largest group of students were enrolled in the physical sciences closely followed by the number enrolled in life sciences. Students receiving veteran's benefits were not included in these data.

[In thousands]

Field	Number of graduate students			Field	Number of graduate students		
	Total	First-year	Advanced-years		Total	First-year	Advanced-years
All fields	37.0	14.0	23.0	Life sciences (excluding psychology)	8.1	2.6	5.5
Engineering	3.5	1.8	1.7	All other	14.3	5.8	8.5
Physical sciences and mathematics	11.1	3.8	7.3				

SOURCE: National Science Foundation.

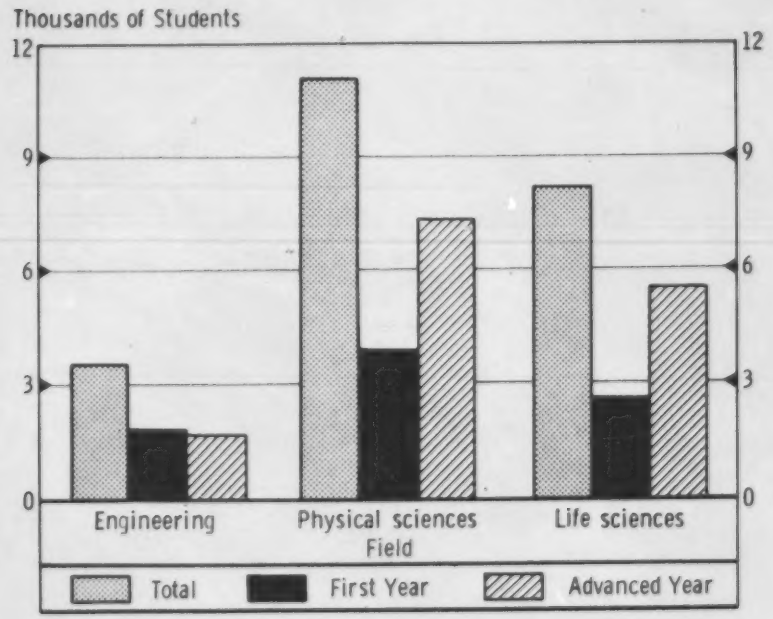


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Figure 53

NUMBER OF GRADUATE STUDENTS SUPPORTED, 1953–54: TYPE AND SOURCE OF SUPPORT

Of the graduate science students receiving support in 1953–54 about equal numbers held teaching and research assistantships and almost 20 percent received fellowships. The parent institution supported two-thirds of all graduate students receiving aid and over half of science students receiving aid. In the sciences the Federal Government supported nearly twice as many students as were supported by other funds.

[In thousands]

Field	Total	Number of graduate students					
		Type of support			Source of support		
		Assistantships		Fellowships	Institutional	Federal Government	Other
		Teaching	Research				
All fields	37.0	16.5	11.9	8.6	24.2	7.0	5.8
Engineering	3.5	1.0	1.7	0.8	1.5	1.2	0.8
Physical sciences and mathematics	11.1	5.3	4.0	1.8	6.4	3.3	1.4
Life sciences (excluding psychology)	8.1	2.8	3.9	1.4	4.8	1.7	1.6
All other	14.3	7.4	2.3	4.6	11.5	0.8	2.0

SOURCE: National Science Foundation.

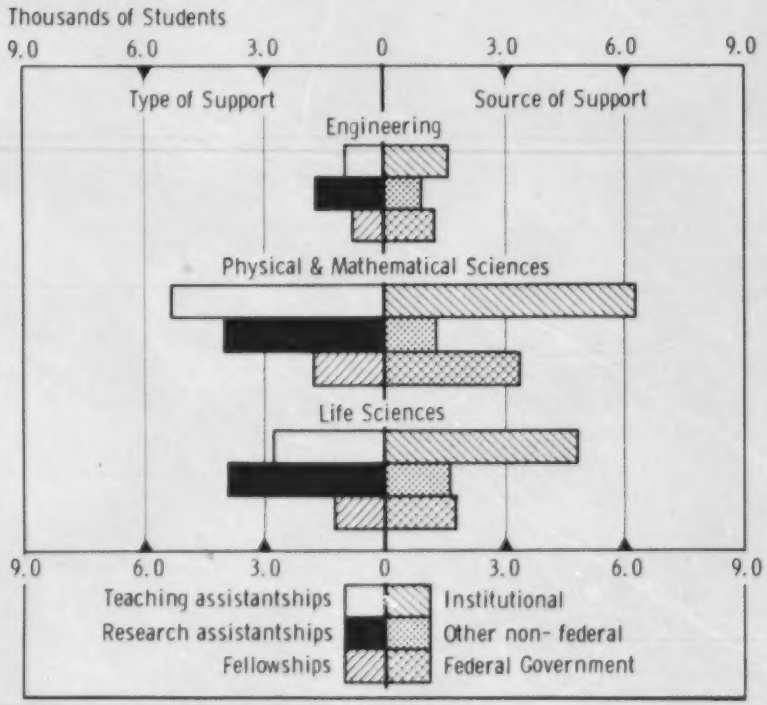


Figure 54

MEAN SALARIES OF FACULTY IN UNDERGRADUATE 4-YEAR COLLEGES, 1958–59

In undergraduate 4-year colleges only, average mean faculty salaries range from $6,780 at public colleges to $6,350 at private colleges. Mean salaries by rank in these same types of institutions range from less than $5,000 for instructors at private colleges to $9,000 for full professors at public schools. Additional salary data for faculty in all institutions of higher education is included in appendix tables 54 b and c.

Rank	Mean salaries			Rank	Mean salaries		
	Total	Public	Private		Total	Public	Private
Instructor	$4,840	$4,960	$4,580	Professor	8,840	9,040	8,510
Assistant professor	5,860	6,060	5,430				
Associate professor	6,920	7,150	6,470	Total	6,630	6,780	6,350

SOURCE: U.S. Office of Education.

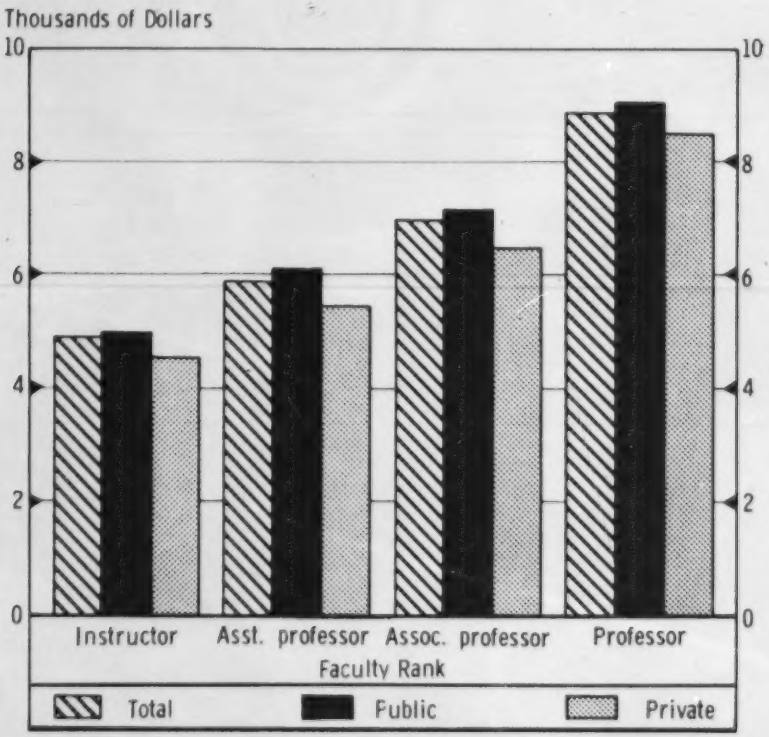


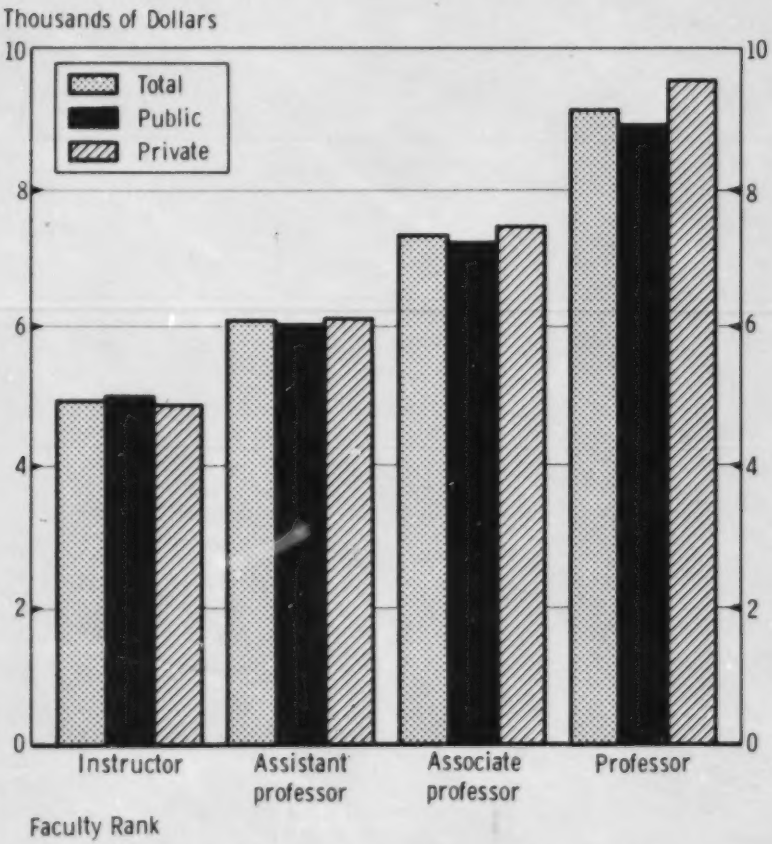
Figure 55

MEDIAN SALARIES OF ENGINEERING FACULTY, 1957–58

The median 1957–58 teaching salary of engineering faculties ranged from less than $5,000 for instructors to almost $10,000 for full professors. The median salary for instructors in publicly controlled institutions was slightly higher than that of their counterparts in privately supported institutions. But professors in private schools received higher salaries than professors in public engineering colleges, indicating a greater spread in salaries in private than in public institutions.

Rank	Median salaries			Rank	Median salaries		
	All institutions	Public	Private		All institutions	Public	Private
Instructor	$4,950	$5,000	$4,800	Associate professor	7,350	7,250	7,300
Assistant professor	6,060	6,043	6,100	Professor	9,200	9,000	9,563

SOURCE: Engineers Joint Council.



Part III

APPENDIX TABLES

TABLE 1.—*Total population, labor force, and professional occupations: decennially 1900–50, annually 1950–58*

[In thousands]

Year	Total population [1]	Labor force [2]	Professional, technical and kindred [3]	Year	Total population [1]	Labor force [2]	Professional, technical and kindred [3]
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1958	[a] 173,260	[b] 63,966	[c] 6,961	1950 [4]	[a] 151,234	[b] 59,648	[c] 4,490
1957	[a] 170,293	[b] 65,016	[c] 6,468				
1956	[a] 167,281	[b] 64,927	[c] 6,096	1950	[a] 151,234	[f] 58,999	[f] 5,081
1955	[d] 164,302	[b] 62,966	[c] 5,782	1940	[a] 131,954	[f] 51,742	[f] 3,879
1954	[a] 161,191	[b] 61,160	[c] 5,588	1930	[a] 123,077	[f] 48,686	[f] 3,311
1953	[a] 158,313	[b] 61,778	[c] 5,447	1920	[a] 106,466	[f] 42,206	[f] 2,283
1952	[a] 155,761	[b] 60,988	[c] 5,091	1910	[a] 92,407	[f] 37,291	[f] 1,758
1951	[a] 153,384	[b] 60,854	[c] 4,788	1900	[a] 76,094	[f] 29,030	[f] 1,234

[1] Data are for population residing in continental United States, July 1, excluding Armed Forces overseas.
[2] Data from 1950 to 1958 are for total employed civilian labor force; data from 1900 to 1950 are "economically active" civilians.
[3] Data for professional, technical and kindred occupations are taken from series comparable to the labor force data.
[4] Because different series are used data from each series were reported for 1950.
[a] U.S. Department of Commerce, Bureau of the Census, Series P–25, No. 193, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1958 to 1958*, p. 11.
[b] U.S. Department of Labor, Bureau of Labor Statistics, *Estimated Total Labor Force, Classified by Employment Status, Annual Averages, 1989–58*, BLS58–2538, p. 1.
[c] Bureau of Labor Statistics work sheets, cited Bureau of the Census and BLS, *Annual Reports on the Labor Force*.
[d] Bureau of the Census, Series P–25, No. 170, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1955 to 1957*, p. 11.
[e] Bureau of the Census, Series P–25, No. 146, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1950 to 1958*, pp. 11–13.
[f] Bureau of the Census, *Occupational Trends in the United States, 1900–50*, "Bureau of the Census Working Paper Number 5," p. 6.
[g] Bureau of the Census, Series P–25, No. 114, *Estimates of the Population of the United States, by Age, Color, and Sex, 1900 to 1940*, pp. 3–5.

TABLE 2a.—*United States populations of school age: decennially 1900–50, annually 1950–58, projections 1960 and 1970*

[In thousands]

Year	Selected age groups						
	5–13	14–17	18–21 [2]	22–24 [2]	5–17	18–24	5–24
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1970 [a] [1]	*38,929*	*15,875*	*14,573*	*10,210*	*54,804*	*24,783*	*79,587*
1960 [a] [1]	*33,607*	*11,204*	*9,605*	*6,677*	*44,811*	*16,282*	*61,093*
1958 [b]	31,146	10,629	8,758	6,286	41,775	15,044	56,819
1957 [b]	30,057	10,166	8,589	6,180	40,223	14,769	54,992
1956 [b]	29,223	9,536	8,412	6,180	38,759	14,592	53,351
1955 [c]	28,101	9,229	8,198	6,304	37,330	14,502	51,832
1954 [d]	26,961	9,002	8,019	6,336	35,963	14,355	50,318
1953 [d]	25,701	8,878	8,053	6,387	34,579	14,440	49,019
1952 [d]	24,457	8,728	8,177	6,436	33,185	14,613	47,798
1951 [d]	22,887	8,525	8,418	6,711	31,412	15,129	46,541
1950 [d]	22,285	8,439	8,771	6,994	30,724	15,765	46,489
1940 [e]	19,942	9,845	9,700	6,900	29,787	16,597	46,294
1930 [e]	22,267	9,369	9,000	6,400	31,636	15,482	47,118
1920 [e]	20,124	7,869	7,400	5,500	27,993	12,989	40,982
1910 [e]	17,134	7,254	7,300	5,400	24,388	12,770	37,158
1900 [e]	15,400	6,131	6,000	4,400	21,531	10,383	31,914

[1] Estimated figures include Armed Forces overseas.
[2] Data for 1900–40 in millions; were obtained from the U.S. Office of Education; and supplied to it by the Bureau of the Census.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Series P–25.
[a] No. 187, *Illustrative Projections of the Population of the United States, by Age and Sex 1960 to 1980*, pp. 16, 17. The Bureau of the Census made four separate population projection series for 1960 to 1980; Series II was selected in preference to the other three as it represented the medium high projections.
[b] No. 193, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1958 to 1958*, p. 11.
[c] No. 170, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1955 to 1957*, p. 11.
[d] No. 146, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1950 to 1958*, pp. 11–13.
[e] No. 114, *Estimates of the Population of the United States, by Age, Color, and Sex, 1900 to 1940*, pp. 3–5.

TABLE 2b.—*Selected age groups as a percent of total population in continental United States, excluding Armed Forces overseas: decennially 1900–50, annually 1950–58, projections 1960 and 1970*

Year	Selected age groups						
	5–13	14–17	18–21	22–24	5–17	18–24	5–24
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1970 [1]	*18.2*	*7.4*	*8.8*	*4.8*	*25.6*	*13.6*	*37.1*
1960 [1]	*18.6*	*6.2*	*8.3*	*3.7*	*24.8*	*9.0*	*33.8*
1958	18.0	6.1	5.1	3.6	24.1	8.7	32.8
1957	17.7	6.0	5.0	3.6	23.6	8.7	32.3
1956	17.5	5.7	5.0	3.7	23.2	8.7	31.9
1955	17.1	5.6	5.0	3.8	22.7	8.8	31.5
1954	16.7	5.6	5.0	3.9	22.3	8.9	31.2
1953	16.2	5.6	5.1	4.0	21.8	9.1	31.0
1952	15.7	5.6	5.2	4.1	21.3	9.4	30.7
1951	14.9	5.6	5.5	4.4	20.5	9.9	30.3
1950	14.7	5.6	5.8	4.6	20.3	10.4	30.7
1940	15.1	7.5	7.4	5.2	22.6	12.5	35.1
1930	18.1	7.6	7.3	5.2	25.7	12.6	38.3
1920	18.9	7.4	7.0	5.2	26.3	12.2	38.5
1910	18.5	7.9	7.9	5.8	26.4	13.8	40.2
1900	20.2	8.1	7.9	5.8	28.3	13.6	41.9

[1] Estimated figures include Armed Forces overseas.

SOURCE: See Table 2a.

TABLE 2c.—*Selected age groups as a percent of total age group 5–24, in continental United States, excluding Armed Forces overseas: decennially 1900–50, annually 1950–58, projections 1960 and 1970*

Year	Selected age groups						
	5–13	14–17	18–21	22–24	5–17	18–24	5–24
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1970 [1]	*48.9*	*19.9*	*18.5*	*12.8*	*68.9*	*31.1*	*100.0*
1960 [1]	*55.0*	*18.5*	*15.7*	*10.9*	*73.5*	*26.7*	*100.0*
1958	54.8	18.7	15.4	11.1	73.5	26.5	100.0
1957	54.7	18.5	15.6	11.3	73.1	26.9	100.0
1956	54.8	17.9	15.8	11.6	72.7	27.3	100.0
1955	54.2	17.8	15.8	12.2	72.0	28.0	100.0
1954	53.6	17.9	15.9	12.6	71.5	28.5	100.0
1953	52.4	18.1	16.4	13.0	70.5	29.5	100.0
1952	51.2	18.2	17.1	13.5	69.4	30.6	100.0
1951	49.2	18.3	18.1	14.4	67.5	32.5	100.0
1950	47.9	18.2	18.9	15.0	66.1	33.9	100.0
1940	43.1	21.3	21.0	14.9	64.3	35.7	100.0
1930	47.3	19.9	19.1	13.6	67.1	32.9	100.0
1920	49.1	19.2	18.1	13.4	68.3	31.7	100.0
1910	46.1	19.5	19.6	14.5	65.6	34.4	100.0
1900	48.3	19.2	18.8	13.8	67.5	32.5	100.0

[1] Estimated figures include Armed Forces overseas.

SOURCE: Table 2a.

TABLE 3.—*Total population, population in age group 20–44, and percent age group 20–44 is of total population in continental United States, excluding Armed Forces overseas: decennially 1900–50, annually 1950–58, projections 1960 and 1970*

[In thousands]

Year	Total population	Population age group 20–44	Percent of 20–44 age group to total	Year	Total population	Population age group 20–44	Percent of 20–44 age group to total
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1970 [a] [1]	*213, 810*	*65, 555*	*30. 7*	1952 [d]	155, 761	56, 556	36. 3
1960 [a] [1]	*180, 196*	*58, 118*	*32. 5*	1951 [d]	153, 384	56, 664	36. 9
				1950 [d]	151, 234	56, 756	37. 5
1958 [b]	173, 280	57, 231	33. 0				
1957 [b]	170, 293	57, 097	33. 5	1940 [c]	131, 954	51, 414	39. 0
1956 [b]	167, 201	57, 093	34. 1	1930 [c]	123, 077	47, 224	38. 4
1955 [c]	164, 303	56, 953	34. 7	1920 [c]	106, 466	41, 040	38. 5
1954 [d]	161, 191	56, 618	35. 1	1910 [c]	92, 407	35, 153	39. 1
1953 [d]	158, 313	56, 516	35. 7	1900 [c]	76, 094	28, 816	37. 9

[1] Estimates include Armed Forces overseas.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Series P–25.

[a] No. 187, *Illustrative Projections of the Population of the United States by Age and Sex 1960 to 1980*, pp. 16 and 17, Series II, (see table 2a, source [a] for discussion).
[b] No. 193, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1956 to 1958*, p. 11.
[c] No. 170, *Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1955 to 1957*, p. 11.
[d] No. 146, *Estimates of the Population of the United States by Age, Color, and Sex, July 1, 1950 to 1956*, pp. 11–13.
[e] No. 114, *Estimates of the Population of the United States, by Age, Color, and Sex, 1900 to 1940*, pp. 3–5.

TABLE 4.—*Educational achievement of age group 25–34 at decennial years for selected educational levels, number and percent: estimated 1920–50, projections 1960 and 1970*

[In thousands]

Years	School years completed					
	8 or more		12 or more		At least 16	
	Number	Percent of cohort group	Number	Percent of cohort group	Number	Percent of cohort group
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1970 [1]	*25, 451*	*95. 0*	*16, 691*	*66. 2*	*3, 090*	*12. 3*
1960 [1]	*20, 549*	*90. 0*	*15, 701*	*69. 0*	*2, 418*	*10. 6*
1950	20, 055	84. 8	11, 898	50. 3	1, 789	7. 6
1940 [2]	16, 544	77. 8	8, 108	38. 1	1, 551	7. 3
1930 [2]	11, 959	69. 8	4, 893	28. 6	1, 042	6. 1
1920 [2]	8, 107	61. 6	2, 983	22. 1	612	4. 7

[1] The projected educational achievement or attainment of the 25–29 and 30–34 age cohorts were combined for number; then achievement percentages were recomputed; Series B was used for 1970.
[2] The tables for 1950 were used to estimate for prior years by using successive age cohorts. "For example the educational levels at a given future [or past] date were assumed to be the same for men 40–44 years 10 years earlier," p. 1.

SOURCE: U.S. Department of Commerce, the Bureau of the Census, Series P–20, No. 91, *Projections of Educational Attainment in the U.S.: 1969 to 1980*, pp. 6–9.

TABLE 5.—*Enrollments of elementary and secondary public and nonpublic day schools: continental United States, decennially 1900–50, annually 1950–59, projections 1960 and 1965*

School year	Total enrollments, public and private	Elementary school enrollments, public and private	Secondary school enrollments, public and private	School year	Total enrollments, public and private	Elementary school enrollments, public and private	Secondary school enrollments, public and private
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1964–65 [a]	*47, 178, 000*	*34, 793, 000*	*12, 385, 000*	1951–52 [c]	30, 554, 464	23, 958, 113	6, 596, 351
1969–60 [b]	*42, 700, 000*	*33, 460, 000*	*9, 240, 000*	1950–51			
1958–59 [b]	40, 950, 000	32, 010, 000	8, 940, 000	1949–50 [c]	28, 660, 250	22, 207, 241	6, 452, 009
1957–58 [a]	39, 094, 000	30, 670, 000	8, 424, 000	1939–40 [c]	28, 257, 000	21, 127, 021	7, 129, 979
1956–57 [a]	37, 531, 000	29, 711, 000	7, 820, 000	1929–30 [c]	28, 551, 640	23, 739, 840	4, 811, 800
1955–56 [a]	36, 261, 300	28, 514, 200	7, 747, 000	1919–20 [c]	23, 463, 898	20, 963, 722	2, 500, 176
1954–55 [d]	35, 160, 000	27, 738, 000	7, 422, 000	1909–10 [c]	19, 643, 933	18, 528, 535	1, 115, 398
1953–54 [a]	33, 396, 338	26, 287, 365	7, 108, 973	1899–1900 [c]	16, 961, 249	16, 261, 846	699, 403
1952–53							

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] "Enrollments in Elementary and Secondary Schools, Public and Nonpublic: continental U.S. . . . 1955–65 (estimated)" unpublished mimeographed table dated February 1957.
[b] Press Release, HEW-L9, 8–30–59.
[c] Press Release, HEW-D81, 9–2–56.
[d] Press Release, HEW-C59, 9–8–55.
[e] *Biennial Survey of Education in the United States—1953–54*, ch. 1, "Statistical Summary of Education, 1953–54," p. 7.

TABLE 6.—*Fall enrollments in institutions of higher education: aggregate United States, decennially 1900–50, annually 1950–58, projections 1960 and 1970*

Academic year	Fall enrollment			Percentage distribution [1]		
	Total	Undergraduate	Graduate	Total	Undergraduate	Graduate
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1969–70	*[a] 6, 006, 000*	*[b] 5, 447, 000*	*[b] 559, 000*	*100. 0*	*90. 7*	*9. 3*
1959–60	*[a] 3, 567, 000*	*[b] 3, 235, 000*	*[b] 332, 000*	*100. 0*	*90. 7*	*9. 3*
1957–58	[c] 3, 258, 556	[d] 2, 948, 993	[d] 309, 563	100. 0	90. 5	9. 5
1956–57	[c] 3, 068, 417	[d] 2, 776, 917	[d] 291, 500	100. 0	90. 5	9. 5
1955–56	[c] 2, 946, 985	[d] 2, 667, 021	[d] 279, 964	100. 0	90. 5	9. 5
1954–55	[c] 2, 678, 623	[d] 2, 410, 761	[d] 267, 862	100. 0	90. 0	10. 0
1953–54	[c] 2, 499, 750	[d] 2, 224, 778	[d] 274, 972	100. 0	89. 0	11. 0
1952–53	[c] 2, 250, 701	[f] 2, 014, 378	[f] 236, 323	100. 0	89. 5	10. 5
1951–52	[c] 2, 148, 284	[e] 1, 931, 307	[e] 216, 977	100. 0	90. 0	10. 0
1950–51	[c] 2, 116, 440	[f] 1, 915, 378	[f] 201, 062	100. 0	90. 5	9. 5
1949–50	[c] 2, 296, 592	[e] 2, 092, 195	[e] 204, 397	100. 0	91. 1	8. 9
1939–40	[b] 1, 494, 203	[b] 1, 388, 456	[b] 105, 748	100. 0	92. 9	7. 1
1929–30	[b] 1, 100, 737	[b] 1, 053, 482	[b] 47, 255	100. 0	95. 7	4. 3
1919–20	[b] 597, 880	[b] 582, 268	[b] 15, 612	100. 0	97. 4	2. 6
1909–10	[b] 355, 213	[b] 346, 060	[b] 9, 153	100. 0	97. 4	2. 6
1899–1900	[b] 237, 592	[b] 231, 761	[b] 5, 831	100. 0	97. 5	2. 5

[1] Percentage distribution for 1951 and 1953 are NSF estimates, see footnotes under SOURCE for methodology.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education. *Fall Enrollment in Higher Education*, Circulars 518 and 544; *Biennial Survey of Education in the United States—1954–56*. Ch. 4, sec. 1, "Statistics of Higher Education: 1955–56, Faculty, Students, and Degrees" and unpublished estimates by the Office of Education. For specific references and methodology see footnotes below.

[a] "Projections of First-time Enrollment, and Total Fall Enrollment in Institutions of Higher Education in Continental United States: Fall 1956 to 1970" (Mimeographed table, 5–18–59).
[b] Distribution of estimates for regular session enrollment between undergraduate and graduate enrollment assumed to hold for fall enrollment estimates. Data for regular session taken from Office of Education, "Projections of Regular Session Enrollments in Institutions of Higher Education, by Undergraduate and Graduate Levels: Continental United States; 1959–60 to 1970–71" (Mimeographed table, 5–18–59).
[c] *Opening (Fall) Enrollment in Higher Education, 1958*, Circular No. 544, p. 1.
[d] Same methodology and data described in footnote [b] used for distribution of total fall enrollment by undergraduate and graduate levels.
[e] *Opening Enrollment in Higher Educational Institutions, Fall, 1957*, Circular No. 518, p. 3.
[f] and [e] Same methodology described in footnote [b] used; data used in computing for figures footnoted [e] from Office of Education, *Biennial Survey of Education in the United States*—1954–56, ch. 4, sec. 1 "Statistics of Higher Education, 1955–56, Faculty, Students, and Degrees," p. 8. Data for figures not reported in biennial surveys and footnote [f] derived by computing the mean of the proportion for the two contiguous years and applying those proportions to total fall enrollment for the respective years.
[b] *Biennial Survey, Loc. cit.*

TABLE 7.—*Estimated educational retention rates* [1] *for each class, fifth grade through college entrance, in public and nonpublic schools: continental United States, from 1934–35 to 1950–51*

Grade	Retention per 1,000 pupils in the fifth grade in—																
	1934–35	1935–36	1936–37	1937–38	1938–39	1939–40	1940–41	1941–42	1942–43	1943–44	1944–45	1945–46	1946–47	1947–48	1948–49	1949–50	1950–51
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Fifth [2]	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sixth	953	946	954	954	955	953	968	952	954	972	952	959	954	971	984	984	981
Seventh	892	869	895	901	908	916	910	905	909	914	929	944	945	948	956	967	968
Eight	842	839	849	850	853	846	836	834	847	870	858	875	919	919	929	920	921
Ninth	803	814	839	811	796	781	781	789	807	827	848	872	872	858	863	874	885
Tenth	711	725	704	679	655	673	697	698	713	745	748	766	775	748	795	795	809
Eleventh	610	587	554	519	532	552	566	581	604	[4] 630	650	662	641	670	706	698	711
Twelfth	512	496	425	428	444	476	507	514	[4] 539	557	549	552	583	594	619	611	623
High school graduates	467	439	393	398	419	450	481	488	505	[4] 524	522	524	553	559	581	573	584
Year of graduation	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Enter college	129	119	121	[3]	[3]	[3]	[3]	[3]	[4] 205	218	234	266	283	[5] 286	[5] 297	[5] 293	[5] 299

[1] These retention rates are approximate only. Rates for the fifth grade through high school graduation are based on enrollments in successive grades in successive years in public elementary and secondary schools, and adjusted to include estimates for non-public schools; and rates for first year college enrollment are based on data supplied to Office of Education by institutions of higher education.

[2] Fourth grade in 11-grade systems; fifth grade in 12-grade systems.

[3] Lack of detailed information regarding veteran students makes impossible the calculation of retention rates.

[4] Revised since originally published.

[5] In estimating the number going on to college, it was assumed that the percentage of high school graduates which applied in 1954 and 1955 (51.2%) will continue in 1956, 1957, and 1958.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Biennial Survey of Education in the United States, 1952–54*, "Statistical summary of Education, 1953–54", Chapter 1, p. 10 for column (2) through (14) (1934–35 and 1946–57); unpublished mimeographed sheet from Office of Education for columns (15) through (18) (1947–48 and 1950–51).

TABLE 8.—*Fall 1956 activities of fall 1955 high school seniors*

Activities as reported by principals	Planned to go to college			Planned not to go to college		
	Total	Boys	Girls	Total	Boys	Girls
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total	2,790	1,453	1,287	3,629	1,650	1,979
In college full-time	1,731	955	776	214	127	87
In college part-time	32	18	14	28	17	11
In college; don't know whether full or part-time	15	11	4	5	2	3
College attendance	(1,778)	(984)	(794)	(247)	(146)	(101)
Still in high school	15	11	4	40	24	16
In military service	148	144	4	458	448	10
Full-time job	543	252	291	2,184	923	1,261
Nursing (noncollege)	42	.....	42	78	.....	78
Other	214	62	152	622	109	513
	Percentage distribution					
Total	100.0	100.0	100.0	100.0	100.0	100.0
In college full-time	63.2	65.7	60.3	5.9	7.7	4.4
In college part-time	1.2	1.2	1.1	.8	1.0	.6
In college; don't know whether full or part-time	.5	.8	.3	.2	.1	.2
College attendance	(64.9)	(67.7)	(61.7)	(6.8)	(8.8)	(5.1)
Still in high school	.5	.8	.3	1.1	1.5	.8
In military service	5.4	9.9	.3	12.6	27.2	.5
Full-time job	19.8	17.3	22.6	60.2	55.9	63.7
Nursing (noncollege)	1.5	.....	3.3	2.2	.....	3.9
Other	7.8	4.3	11.8	17.1	6.6	25.9

SOURCE: Educational Testing Service, *Background Factors Relating to College Plans and College Enrollment Among Public High School Students*, April 1957, table D-1.

TABLE 9.—*Relation of college plans to college enrollment, by ability level: high school seniors, spring 1956, college entrants, fall 1956*

Ability level	Planned to go to college		Planned not to go to college		Percent of students that—	
	Enrolled	Did not enroll	Enrolled	Did not enroll	Planned to go	Enrolled
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Boys						
Total	982	462	171	1,575	45	36
(Highest 10%)	(265)	(44)	(22)	(52)	(81)	(75)
Upper 30%	566	150	65	298	68	60
Middle 30%	241	127	61	421	43	36
Lowest 30%	175	192	45	886	28	17
Girls						
Total	709	493	122	2,023	47	27
(Highest 10%)	(185)	(39)	(15)	(95)	(67)	(60)
Upper 30%	428	136	39	408	56	46
Middle 30%	210	139	41	572	36	26
Lowest 30%	156	218	42	1,043	26	14

SOURCE: Educational Testing Service, *Background Factors Relating to College Plans and College Enrollment Among Public High School Students*, April 1957, table D-3 and p. 66.

TABLE 10a.—*Public high school enrollments in selected science and mathematics courses expressed as percent of pupils in grade where course is usually offered, by type of school: fall 1956*

Courses	Typical grade level	Percent of pupils enrolled of total in class				
		All schools	Regular 4-year high	Senior high	Junior-senior high	Undivided high
(1)	(2)	(3)	(4)	(5)	(6)	(7)
General science	9	67.0	70.0	.....	70.2	73.5
Biology	10	75.5	76.2	69.7	81.0	78.9
Chemistry	11	34.6	33.5	36.2	35.1	32.9
Physics	12	24.3	21.7	26.1	26.0	21.3
General mathematics [1]	9	43.1	44.6	.....	41.9	50.1
Elementary algebra [1]	9	67.0	69.5	.....	69.2	68.0
Plane geometry	10	41.6	40.3	43.8	41.7	37.8
Intermediate algebra	11	32.2	29.6	34.5	31.4	35.3
Plain trigonometry	12	9.2	7.9	9.4	10.9	8.2
Solid geometry	12	7.6	7.1	7.6	8.4	6.8

[1] Junior high schools are included in the total but are not presented separately; 41.1 percent enrolled in General Mathematics and 51.7 percent enrolled in Elementary Algebra.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Offerings and Enrollments in Science and Mathematics in Public High Schools, 1956*, pp. 12 and 31.

TABLE 10b.—*Estimated total enrollment in science and mathematics courses in public high schools, school years 1948–49, 1954–55, and 1956–57*

Item	Typical grade	Typical age group	Years			Percent of increase
			1948–49	1954–55	1956–57	1948–49 to 1956–57
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Subject						
General science	9	14	1,074,000	(1)	1,518,000	41.3
Biology	10	15	996,000	1,294,000	1,430,000	43.6
Chemistry	11	16	412,000	483,000	520,000	26.2
Physics	12	17	291,000	303,000	310,000	6.5
Other science	10–12	.....	172,000	(1)	266,000	54.7
Total science	9–12	.....	2,945,000	(1)	4,043,000	37.3
Elementary algebra	9	14	1,042,000	1,205,000	1,518,000	45.7
Intermediate algebra	11	16	372,000	432,000	484,000	30.1
General mathematics	9	14	650,000	800,000	976,000	50.2
Plane geometry	10	15	599,000	664,000	788,000	31.6
Solid geometry	12	17	94,000	147,000	160,000	70.2
Trigonometry	12	17	109,000	170,000	200,000	83.5
Other mathematics	10–12	.....	92,000	(1)	275,000	198.9
Total mathematics	9–12	.....	2,958,000	(1)	4,401,000	48.8

[1] Data not available.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Offerings and Enrollments in Science and Mathematics in Public High Schools, 1956*, 1958 reprint, p. 44.

TABLE 11.—*Enrollments in technical institutes:*[1] *1944–45 to 1957–58*

Academic year	Total	Full-time	Part-time	Academic year	Total	Full-time	Part-time
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1957–58[a]	76,307	40,064	36,239	1950–51[b]	46,441	24,345	22,096
1956–57[a]	57,622	32,498	25,124	1949–50[b]	51,746	31,673	20,073
1955–56[b]	67,163	31,145	36,018	1948–49[b]	52,857	33,326	19,531
1954–55[b]	60,747	26,766	33,981	1947–48[b]	47,641	30,927	16,714
1953–54[b]	50,937	21,527	29,410	1946–47[b]	49,435	29,130	20,305
1952–53[b]	52,737	18,840	33,897	1945–46[b]	18,656	10,777	7,879
1951–52[b]	46,417	19,631	26,786	1944–45[b]	18,875	8,721	10,154

[1] Institutions offering curriculums involving less than 4 years of terminal occupational education.
[a] U.S. Department of Health, Education, and Welfare, Office of Education, *Organized Occupational Curriculum, Enrollments and Graduates, 1957*, Circular 512, p. 15.
[b] Smith & Lipsett, *The Technical Institute*, p. 39.

TABLE 12.—*Engineering enrollments in institutions of higher education in the aggregate United States, by level: 1945–46 to 1959–60, projections 1970*

Academic year	Total enrollment	Undergraduate		Graduate		
		Total	Freshmen	Total	Master's	Doctor's
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1969–70	[a] *551,000*	[b] *495,900*	[a] *133,000*	[b] *55,100*	.....	.....
1959–60[c]	278,348	242,992	67,704	35,356	29,713	5,643
1958–59[d]	289,680	256,779	70,029	32,901	28,138	4,763
1957–58[d]	297,077	268,761	78,757	28,316	24,136	4,180
1956–57[d]	277,052	251,121	77,738	25,931	22,529	3,402
1955–56[d]	243,390	221,448	72,825	21,942	18,779	3,163
1954–55[d]	214,414	193,692	65,505	20,722	17,441	3,281
1953–54[d]	193,333	171,725	60,478	21,608	18,607	3,001
1952–53[d]	176,549	156,080	51,631	20,469	17,537	2,930
1951–52[d]	165,637	145,997	39,571	19,640	16,765	2,875
1950–51[d]	180,262	161,592	34,299	18,670	15,869	2,801
1949–50[d]	219,712	201,927	41,863	17,785	15,242	2,543
1948–49[e]	249,813	234,190	53,000	15,623	13,536	2,087
1947–48[e]	252,245	237,916	64,000	14,329	12,752	1,577
1946–47[e]	211,927	197,794	93,000	14,133	13,022	1,111
1945–46[e]	73,091	69,146	42,000	3,945	3,583	362

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] *Trends in Engineering Education—1939–40 to 1970–71*, 1–24–58, p. 1.
[b] Graduate and undergraduate enrollment estimates were obtained by using a 9:1 ratio against projected total enrollments.
[c] *Advanced Report on Engineering Enrollments and Degrees: 1959*, OE–54004, Circular 613, p. 4.
[d] Engineering Enrollments and Degrees, annual surveys 1949–50 to 1958–59.
[e] Data for 1945–46 through 1948–49 from unpublished Office of Education tables; surveys were conducted by the American Society of Engineering Education.

TABLE 13.—*Total junior-year students, all fields, and number enrolled as majors in science and mathematics, by specific field of study and sex of student: fall 1958 and fall 1957*

Field	Fall 1958			Fall 1957			Percent change 1957–58		
	Both sexes	Men	Women	Both sexes	Men	Women	Both sexes	Men	Women
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total junior-year students	[1] 405,198	268,277	136,921	[1] 390,403	263,249	127,154	3.8	1.9	7.6
All sciences and mathematics	55,777	44,503	11,274	50,513	40,521	9,992	10.4	9.8	12.8
Biological sciences	21,080	16,350	4,730	19,842	15,317	4,525	6.3	6.7	4.7
Premedical, predental, and preveterinary sciences; and biology, general	17,100	13,513	3,587	15,671	12,406	3,265	9.1	8.9	9.9
Premedical, predental, and preveterinary sciences [2]	8,194	7,473	721	9,320	8,107	1,213	−12.1	−7.8	−40.6
Biology, general	8,906	6,040	2,866	6,351	4,299	2,052	40.2	40.5	40.0
Botany, general	347	260	87	328	206	122	5.8	26.2	−28.7
Zoology, general	2,263	1,671	592	2,297	1,614	683	−1.5	3.5	−13.3
Anatomy and histology	99	80	19	60	50	10	[3]	[3]	[3]
Bacteriology, virology, mycology, parasitology	547	254	293	616	322	294	−11.2	−21.1	−0.3
Biochemistry [4]	162	127	35	258	224	34	−37.2	−43.3	[3]
Biophysics	8	8		22	21	1	[3]	[3]	[3]
Entomology	107	102	5	136	128	8	−21.3	−20.3	[3]
Genetics (incl. experimental plant and animal breeding)	17	15	2	19	18	1	[3]	[3]	[3]
Physiology (except plant physiology)	85	44	41	112	57	55	−24.1	[3]	[3]
Plant pathology	13	11	2	20	19	1	[3]	[3]	[3]
Plant physiology	12	12		10	9	1	[3]	[3]	[3]
Biological sciences, all other [5]	329	253	76	293	243	50	12.3	4.1	[3]
Mathematical subjects	11,981	8,604	3,357	9,133	6,520	2,613	31.0	32.0	28.5
Mathematics	11,845	8,506	3,339	9,058	6,465	2,593	30.8	31.6	28.8
Statistics (incl. actuarial science)	116	98	18	75	55	20	[3]	[3]	[3]
Physical sciences	19,814	17,456	2,358	19,080	16,886	2,194	3.8	3.4	7.5
Physical sciences, general (without specific major)	1,065	919	146	891	799	92	19.5	15.0	[3]
Astronomy	52	38	14	31	24	7	[3]	[3]	[3]
Chemistry (excl. biochemistry)	9,231	7,419	1,812	8,946	7,223	1,723	3.2	2.7	5.2
Metallurgy (excl. metallurgical eng'g)	55	54	1	5	5		[3]	[3]	[3]
Meterology	113	112	1	106	104	2	6.6	7.7	[3]
Physics (excl. biophysics)	5,826	5,577	249	5,254	5,041	213	10.9	10.6	16.9
Earth Sciences:									
Geology	3,206	3,095	111	3,592	3,450	142	−10.7	−10.3	−21.8
Geophysics (incl. seismology)	61	61		41	41		[3]	[3]	[3]
Oceanography	7	6	1	6	4	2	[3]	[3]	[3]
Earth sciences, all other	79	78	1	146	135	11	−45.9	−42.2	[3]
Physical sciences not classifiable above	119	97	22	62	60	2	[3]	[3]	[3]
Sciences, general program [6]	2,913	2,093	820	2,458	1,798	660	18.5	16.4	24.2

[1] Includes estimates by Office of Education of junior-year enrollment in separately organized theological and/or religious schools and "Other professional schools".

[2] In 1957, this item was phrased thus: "Biological and Pre-Medical Sciences, general". The shift in frequency of students reported in this category probably arises in part from the change in phrasing.

[3] Not computed when the base figure (fall 1957) is smaller than 100.

[4] The drop in biochemistry majors from 1957 to 1958 arises principally from the change in classification of students from biochemistry (in 1957) to premedical sciences (in 1958) by 2 institutions.

[5] Includes fields of specialization not listed above, such as cytology, ecology, embryology, morphology etc. Does not include the health professions.

[6] Includes general programs consisting of a variety of courses drawn mainly from the physical sciences, biological sciences, and mathematics.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Summary Report of Junior-Year Science and Mathematics Students, Fall 1958*. Circular No. 577, May 1959.

TABLE 14.—*Total resident and special graduate students in first year and advanced years, full-time and part-time, by sex, and by major field: April 1954*

[In thousands]

Field [1]	Total all students	First year				Advanced years				Special students	
		Full-time		Part-time		Full-time		Part-time			
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Total, all fields	171.6	29.0	10.0	34.4	20.1	27.6	5.0	20.7	5.0	12.1	7.6
Natural sciences	50.9	11.1	1.0	10.7	0.6	14.4	1.0	7.1	0.4	4.2	0.4
All other fields	120.7	18.0	9.0	23.7	19.5	13.2	4.0	13.6	4.6	7.9	7.2

[1] The scientific fields include the following disciplines: *Engineering*—Electrical, Mechanical, Chemical, Petroleum, Ceramic, Civil, Aeronautical, Industrial, Engineering Mechanics, Metallurgical, Marine, Engineering, n.e.c.; *Physical Sciences*—Chemistry, Agricultural Chemistry, Physics, Geology, Geophysics, Meterology, Oceanography, Earth Sciences, n.e.c., Metallurgy, Astronomy, Physical Sciences, n.e.c.; *Mathematics*—Mathematics, Applied Mathematics, Statistics; *Life Sciences*—Agricultural and Biological Sciences, and Medical specialties. *All other fields:* All other disciplines except those listed above—Psychology, Geography, and Anthropology are included in all other.

SOURCE: National Science Foundation, *Graduate Student Enrollment and Support in American Universities and Colleges, 1954*, NSF-57-17, pp. 231-34.

TABLE 15.—*Resident and special graduate students in first year and advanced years, full-time and part-time, by major scientific field: April 1954*

Scientific field [1]	Total	First year		Advanced years		Special students
		Full-time	Part-time	Full-time	Part-time	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total, natural sciences	50,864	12,032	11,317	15,494	7,444	4,577
Engineering	15,958	2,896	6,770	1,939	2,644	1,709
Physical sciences	17,958	4,312	2,243	6,781	2,285	1,438
Mathematics	3,889	839	945	1,019	572	514
Life sciences	13,958	3,985	1,359	5,755	1,943	916

[1] See table No. 14 for listing of disciplines included in each field.

SOURCE: National Science Foundation, *Graduate Student Enrollment and Support in American Universities and Colleges, 1954*, NSF-57-17, pp. 231-34.

TABLE 16.—*High school and college graduates, by sex, in the total population of the United States: 1940 and 1950, projections 1960 and 1970*

[In thousands]

Year and sex	High school graduates [1]		College graduates [2]	
	Number	Percent of population 15 years and over	Number	Percent of population 20 years and over
(1)	(2)	(3)	(4)	(5)
Both sexes:				
1970 [3]	70,341	48.0	10,819	8.5
1960 [3]	51,571	41.7	8,109	7.3
1950	38,293	35.0	5,951	6.0
1940	25,670	26.0	3,852	4.5
Male:				
1970 [3]	32,547	45.7	6,537	10.7
1960 [3]	23,972	39.7	4,820	9.0
1950	17,591	32.9	3,369	7.0
1940	11,838	24.0	2,258	5.2
Female:				
1970 [3]	37,794	50.1	4,282	6.5
1960 [3]	27,599	43.5	3,289	5.8
1950	20,703	36.9	2,582	5.1
1940	13,832	28.0	1,594	3.7

[1] Persons who completed 4 or more years of high school.
[2] Persons who completed 4 or more years of college.
[3] Data for 1960 and 1970 based on inclusion of Series B projections for younger age groups.

SOURCE: U.S. Department of Commerce, Bureau of Census, *Projection of Educational Attainment in the U.S., 1960 to 1980*, Series P-20, No. 91, p. 1.

TABLE 17.—*High school graduates, by type of institutional control: decennially 1900–50, annually 1950–58, projections 1960 and 1965*

School year	Total	Public	Private	Percent public
(1)	(2)	(3)	(4)	(5)
1964–65	*[a] 2,542,000*	*[b] 2,250,000*	*[b] 292,000*	*88.5*
1959–60	*[a] 1,903,000*	*[b] 1,696,000*	*[b] 207,000*	*89.1*
1957–58	[a] 1,522,000	[b] 1,347,000	[b] 175,000	88.5
1956–57	[a] 1,458,000	[b] 1,290,000	[b] 168,000	88.5
1955–56	[c] 1,415,000	[c] 1,252,000	[c] 163,000	88.5
1954–55	[d] 1,344,000	[c] 1,189,000	[c] 155,000	[e] 88.5
1953–54	[c] 1,276,000	[c] 1,129,000	[c] 147,000	88.5
1952–53	[d] 1,198,000	[c] 1,058,000	[c] 140,000	[e] 88.3
1951–52	[c] 1,197,000	[c] 1,056,000	[c] 141,000	88.2
1950–51	[d] 1,182,000	[c] 1,045,000	[c] 137,000	[e] 88.4
1949–50	[c] 1,200,000	[c] 1,063,000	[c] 136,000	88.6
1939–40	[c] 1,221,000	[c e] 1,143,000	[c] 78,000	93.6
1929–30	[c] 667,000	[c e] 605,000	[c] 62,000	90.7
1919–20	[c] 311,000	[c e] 275,000	[c] 36,000	88.4
1909–10	[f] 156,000	[g] 111,000	[h] 45,000	71.1
1899–1900	[f] 95,000	[g] 62,000	[h] 33,000	65.3

SOURCE: U.S. Department of Health, Education, and Welfare.
[a] Office of Education, "Projection of Total High School Graduates, Continental United States: 1957–1966," mimeographed table 5–18–59.
[b] A standard proportion, the one obtained for 1955–56—88.5 percent, was taken against total graduates for distribution between public and private high school graduates.
[c] *HEW Trends, 1959*, p. 44; [e] These are estimates of total population and differ from *Biennial Survey of Education in the United States, 1952–54*, ch. 1, p. 20.
[d] *Biennial 1954–56*, ch. IV, sec. 1, p. 77.
[e] The distribution, public, private, was obtained by taking the average of the distribution of the two contigious years and applying against the total reported for the year.
[f] *Biennial, 1947–48*, "Statistical Summary of Education," ch. I, p. 27.
[g] *Biennial, 1953–54*, "Statistical Summary of Education," ch. I, p. 20.
[h] Obtained by subtracting col. (3) from col. (2).

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TABLE 18.—*Percentage distribution of 1957 public high school graduates, by years of high school mathematics and science courses completed, and by size of school enrollment*

Number of years completed	Percent of all graduates							
	Mathematics				Science			
	Total	Small	Medium	Large	Total	Small	Medium	Large
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4 or more years	14.4	9.7	15.3	17.3	14.2	12.4	14.8	15.1
3, less than 4 years	22.9	23.0	22.4	23.3	24.6	24.7	24.9	24.2
2, less than 3 years	35.2	36.5	35.1	34.3	36.9	42.3	36.3	33.0
1, less than 2 years	25.6	29.7	25.3	22.6	22.8	19.3	22.5	25.9
No mathematics or science	1.9	1.1	1.9	2.5	1.5	1.3	1.5	1.8

[1] Schools enrolling fewer than 300 students were small; schools enrolling 300–999 students were medium; and schools enrolling 1,000 or more students were large.

SOURCE: National Education Association, Research Division, *Mathematics and Science Teaching and Facilities*, March 1959, p. 42.

TABLE 19a.—*Earned degrees in the aggregate United States,*[1] *by level of degree: decennially 1900–50, annually 1950–58, projections 1960 and 1970*

Academic year	Degrees				
	Total	Bachelor's	Master's	Doctor's	Total graduate
(1)	(2)	(3)	(4)	(5)	(6)
1969–70 [a]	*875,100*	*718,000*	*139,000*	*18,100*	*157,100*
1959–60 [a]	*490,400*	*405,000*	*75,700*	*9,700*	*85,400*
1957–58 [b]	440,304	365,748	65,614	8,942	74,556
1956–57 [b]	411,058	340,347	61,955	8,756	70,711
1955–56 [b]	379,495	311,298	59,294	8,903	68,197
1954–55 [b]	354,445	287,401	58,204	8,840	67,044
1953–54 [b]	358,669	292,880	56,823	8,906	65,819
1952–53 [b]	374,189	304,857	61,023	8,309	69,332
1951–52 [b]	403,194	331,924	63,587	7,683	71,270
1950–51 [b]	456,822	384,352	65,132	7,338	72,470
1949–50 [b]	498,586	433,734	58,219	6,633	64,852
1939–40 [b]	216,521	186,500	26,731	3,290	30,021
1929–30 [c]	139,752	122,484	14,969	2,299	17,268
1919–20 [c]	53,516	48,622	4,279	615	4,894
1909–10 [c]	36,734	34,178	2,113	443	2,556
1899–1900 [c]	27,289	25,324	1,583	382	1,965

[1] For definition, see footnote 1, table 19b.

SOURCE: U.S. Department of Health, Education, and Welfare.
[a] Office of Education, *Projection of Earned Degrees to 1969–70*, OE–54002, p. 5.
[b] Office of Education, *Earned Degrees Conferred by Higher Educational Institutions, 1957–58*, p. 1.
[c] *HEW, Trends, 1959*, p. 45.

TABLE 19b.—*Earned degrees conferred, by field of study, and by level of degree: aggregate United States,[1] academic years 1956–57 and 1957–58*

Field of study	Level of degrees					
	Bachelor's and 1st professional[2]		2d level (master's except 1st professional[3]		Doctor's (Ph. D. Ed. D., etc.)	
	1956–57	1957–58	1956–57	1957–58	1956–57	1957–58
(1)	(2)	(3)	(4)	(5)	(6)	(7)
All fields	340,347	365,743	61,955	65,614	8,756	8,942
Agriculture	5,490	5,525	953	949	289	309
Agronomy, field crops	526	624	224	219	72	77
Animal husbandry	1,374	1,306	170	207	59	64
Dairy husbandry	277	253	72	70	18	25
Dairy manufacturing, dairy technology	199	207	30	44	12	10
Farm management (excluding agricultural economics)	78	80	15	6	9	1
Food technology	97	92	35	22	7	18
Horticulture (fruit and vegetable production)	274	312	114	109	40	36
Ornamental horticulture (floriculture, nursery management, landscape gardening)	164	181	7	11	6	----
Poultry husbandry	148	131	59	48	7	21
Soils (soil science, soil management, soil conservation)	127	140	74	69	35	36
Agriculture, other specific major fields	511	519	101	66	23	11
Agriculture, general (general agricultural curriculum, without major specialization)	1,575	1,527	34	64	----	10
Agriculture—not further classified	140	153	18	14	1	----
Architecture (excluding architectural engineering)	1,493	1,612	208	231	3	5
Biological sciences[4]	13,868	14,408	1,801	1,852	1,103	1,125
Premedical, predental, and preveterinary sciences	4,632	3,962	70	25	6	2
Biology, general	5,698	6,812	457	470	138	130
Botany, general	282	308	144	160	122	114
Zoology, general	1,993	1,980	309	310	174	160
Anatomy and histology	52	59	45	40	25	35
Bacteriology, virology, mycology, parasitology	422	515	244	249	148	160
Biochemistry	107	150	101	156	123	149
Biophysics	8	9	10	10	25	15
Entomology	104	88	121	108	72	83
Genetics (including experimental plant and animal breeding)	7	13	24	38	29	53
Optometry (preprofessional bachelor's degree)	206	261	----	----	----	----
Pathology (except plant pathology)	----	----	21	18	5	16
Pharmacology (excluding pharmacy)	----	----	29	25	39	38
Physiology (except plant physiology)	91	78	73	85	70	73
Plant pathology	7	17	60	67	62	45
Plant physiology	6	9	5	9	13	14
Biological sciences, all other	263	147	88	82	52	38
Business and commerce	46,760	51,254	3,270	4,041	93	109
Accounting	10,069	10,848	414	474	14	17
Hotel and restaurant administration	372	375	15	10	----	----
Secretarial studies	1,273	1,283	1	3	----	2
Business and commerce, other specific major fields	18,698	19,734	1,817	1,928	37	46
Business and commerce, general (general curriculum without major specialization)	14,937	18,271	929	1,342	42	36
Business and commerce—not further classified	1,411	743	94	284	----	8
Education	77,722	82,892	30,972	31,112	1,533	1,638
Specialized teaching fields	30,986	34,154	5,919	6,476	241	390
Physical education (separate curriculum; or combined curriculum with health education or recreation)	9,496	10,607	1,464	1,567	75	88
Health education (separate curriculum)	82	116	98	95	12	14
Recreation (separate curriculum)	344	411	78	88	13	13
Education of exceptional children (all areas except education of mentally retarded and speech correction)	194	203	271	300	10	5
Education of mentally retarded	148	184	65	84	1	7
Speech correction	501	570	158	165	11	22
Agricultural education	1,324	1,543	427	376	12	13
Art education	1,531	1,645	282	286	11	5
Business education, Commercial education	4,891	5,154	556	618	21	13

See footnotes at end of table.

TABLE 19b.—*Earned degrees conferred, by field of study, and by level of degree: aggregate United States,[1] academic years 1956–57 and 1957–58*—Continued

Field of study	Level of degrees					
	Bachelor's and 1st professional [2]		2d level (master's, except 1st professional [2]		Doctor's (Ph. D. Ed. D., etc.)	
	1956–57	1957–58	1956–57	1957–58	1956–57	1957–58
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Education—Continued						
Specialized teaching fields—Continued						
Distributive education (retail selling)	57	85	51	58	5	1
Home economics education	3,286	3,571	318	358	12	14
Industrial arts education (nonvocational)	2,751	3,338	427	484	11	20
Music education	4,292	4,753	969	1,028	29	41
Trade and industrial education (vocational)	641	807	182	206	4	16
Specialized teaching fields, all other	1,448	1,167	573	763	14	118
General teaching fields	45,255	47,605	9,310	9,164	198	177
Nursery and/or kindergarten education	746	529	8	16	1	3
Early childhood education (through primary grades)	2,910	2,985	324	274	1	7
Elementary education	38,967	42,303	5,648	5,706	59	65
Secondary education (including junior high school) [3]	1,767	1,441	2,595	2,148	78	55
Combined elementary and secondary education	706	336	406	366	5	10
Adult education	2		35	33	17	5
Other	157	11	294	621	37	32
Non-teaching fields	194	138	14,566	14,276	1,036	950
Counseling and guidance, educational administration and supervision, educational finance, curriculum, comparative education, etc	190	123	6,505	7,332	449	458
Education, general (without specific concentration)—second-level or higher degrees only			7,931	6,766	517	436
Other	4	15	130	178	70	56
Education—preprofessional bachelor's degree only	265	120				
Education—not further classified	1,022	875	1,177	1,196	58	121
Engineering	31,211	35,332	5,233	5,788	596	647
English and journalism	17,998	19,235	2,255	2,532	354	335
English and literature (including comparative literature)	15,426	16,669	2,032	2,319	350	333
Journalism	2,572	2,566	223	213	4	2
Fine and applied arts	11,785	12,252	2,387	2,448	246	219
Art, general (general curriculum, without major specialization)	2,218	2,487	293	346	8	10
Music, including sacred music (excluding music education)	3,127	2,872	1,055	1,010	92	74
Speech and dramatic arts (excluding speech correction)	3,601	3,824	727	761	127	102
Fine and applied arts, other specific major fields	2,675	2,995	282	304	17	31
Fine and applied arts—not further classified	164	74	30	27	2	2
Foreign languages and literature	4,322	4,503	880	1,044	215	224
Linguistics (including phonetics and semantics)	25	20	31	75	16	30
Latin and/or Greek	552	576	140	164	27	22
Modern foreign languages	3,530	3,790	663	695	164	149
Chinese	3	5	1	1	2	1
French	1,445	1,549	234	252	50	37
German	410	488	61	83	32	34
Italian	67	60	11	8	1	5
Japanese	2	5	8	3	4	2
Philology and literature of Germanic languages	4	5	10	10	8	8
Philology and literature of romance languages	44	37	49	21	17	20
Russian or other Slavic languages	107	80	33	23	10	4
Spanish	1,349	1,468	231	258	37	34
Modern foreign languages, all other	99	93	25	36	3	4
Foreign languages and literature, not classifiable above	215	117	46	112	8	23
Forestry	1,129	1,244	169	155	52	31
Geography	669	849	182	184	47	56

See footnotes at end of table.

TABLE 19b.—*Earned degrees conferred, by field of study, and by level of degree: aggregate United States,[1] academic years 1956–57 and 1957–58*—Continued

Field of study	Level of degrees					
	Bachelor's and 1st professional [2]		2d level (master's, except 1st professional [2]		Doctor's (Ph. D. Ed. D., etc.)	
	1956–57	1957–58	1956–57	1957–58	1956–57	1957–58
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Health Professions	23,075	23,923	1,385	1,680	150	147
Chiropody or podiatry	106	120				
Dental hygiene	169	187				
Dentistry, D.D.S. and D.M.D. only	3,038	3,065				
Hospital administration	156	177				2
Medical technology	802	961	6	7		
Medicine, M.D. only	6,785	6,861				
Nursing (including public health nursing; excluding nursing education)	5,750	6,052	310	479		
Occupational therapy	407	407	10	9		
Optometry (excluding preprofessional degree)	336	334	5	3	1	
Osteopathy	441	437	6	6		
Pharmacy (excluding pharmacology)	3,542	3,782	117	122	63	59
Physical therapy, physiotherapy	457	441	30	32		
Public health	191	211	517	602	22	29
Radiologic technology (mainly X-ray technic)	9	7				
Veterinary medicine, D.V.M. only	794	845				
Clinical dental sciences (advanced degrees only)			151	169	1	5
Clinical medical sciences (advanced degrees only)			199	224	38	40
Clinical veterinary medical sciences (advanced degrees only)			27	23	18	8
Health professions, all other	32	36	7	4	7	4
Home economics	4,614	4,312	481	447	46	23
Home economics, general curriculum	2,607	2,353	169	147	4	4
Child development, family relations	359	333	66	57	19	11
Clothing and textiles	385	433	50	73	2	1
Foods and nutrition	562	558	92	82	12	3
Institution management, institution administration	181	170	16	12		
Home economics, other specific major fields	349	394	39	42	8	4
Home economics—not further classified	171	71	49	34	1	
Law (LL.B., J.D., or higher degrees)	8,832	9,433	456	458	31	32
Library science	1,542	1,600	198	157	9	19
Mathematical subjects	5,546	6,924	965	1,234	249	247
Mathematics	5,491	6,835	899	1,097	222	210
Statistics (including actuarial science)	55	89	66	137	27	37
Merchant Marine—Deck-Officer Curriculum Only	167	156				
Military, Naval, or Air Force Science	1,808	1,952		6		
Philosophy	2,833	2,981	292	312	85	102
Philosophy (except scholastic philosophy)	1,445	1,531	156	160	66	80
Scholastic philosophy	1,388	1,450	136	152	19	22
Physical sciences [3]	12,934	14,352	2,704	3,034	1,674	1,655
Physical sciences, general (without specific major)	858	1,005	120	179	21	25
Astronomy	17	25	13	20	8	22
Chemistry (excluding biochemistry)	6,591	7,010	1,047	1,125	1,003	939
Metallurgy (excluding metallurgical engineering)	8	40	16	33	13	10
Meteorology	79	153	51	71	22	14
Physics	2,745	3,186	825	795	453	464
Earth Sciences	2,626	2,891	608	753	153	167
Geology	2,548	2,788	548	700	129	136
Geophysics (including seismology)	22	39	19	18	12	15
Oceanography	4	3	25	7	10	13
Earth sciences, all other	52	61	16	28	2	3
Physical sciences, not classifiable above	10	42	24	58	1	14
Psychology	6,191	6,930	1,095	1,235	550	572
Religion	8,298	8,830	1,114	1,077	246	290
Religious education and bible	2,964	3,180	380	361	40	38
Theology (curriculum leading specifically to first professional ministerial degree)	4,526	4,795				
Theology—master's and doctor's degree only			598	597	133	170
Religion—liberal arts curriculum, nonsectarian	707	710	78	43	62	62
Religion, all other	101	145	58	76	11	20

See footnotes at end of table.

TABLE 19b.—*Earned degrees conferred, by field of study, and by level of degree: aggregate United States,[1] academic years 1956–57 and 1957–58*—Continued

Field of study	Level of degrees					
	Bachelor's and 1st professional [2]		2d level (master's, except 1st professional [3]		Doctor's (Ph. D, Ed. D., etc.)	
	1956–57	1957–58	1956–57	1957–58	1956–57	1957–58
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Social sciences [4]	44, 165	48, 156	4, 552	5, 159	1, 098	1, 106
Basic [5]	39, 702	43, 370	3, 801	4, 292	983	994
Social sciences, general (without specific major)	7, 472	8, 700	513	687	18	12
American civilization, American culture	401	492	31	36	19	16
Anthropology	350	359	77	118	49	51
Area studies, regional studies	187	209	82	99	26	27
Economics	6, 878	7, 514	606	669	236	239
History	11, 692	12, 893	1, 256	1, 397	314	297
International relations	333	334	177	198	29	23
Political science or government	5, 874	6, 167	535	665	156	170
Sociology	6, 383	6, 583	515	397	134	150
Basic social sciences, all other	132	129	9	26	2	9
Applied	4, 463	4, 786	751	867	115	112
Agricultural economics	515	628	243	264	77	71
Foreign service programs (consular and diplomatic service)	184	232	[6]	14	.....	.....
Industrial relations	1, 065	1, 176	137	182	4	1
Public administration	564	554	311	254	16	22
Social work, social administration	1, 901	1, 994	33	124	18	18
Applied social sciences, all other	234	202	13	29	.....	.....
Trade and industrial training	1, 336	1, 463	.....	.....	.....	.....
Arts, general program (without major field)	2, 177	1, 410	157	61	59	27
Sciences, general program (without major field)	1, 416	1, 892	96	223	5	.....
Arts and sciences, general program	2, 270	1, 580	64	67	6	.....
Major fields of study not classifiable above	377	368	66	107	17	24
Major field not identified	289	290	20	21	.....	.....

[1] "Aggregate United States" includes continental United States (48 States and District of Columbia) plus outlying parts (Alaska, Hawaii, etc.).

[2] Includes bachelor of arts, bachelor of science, and such first professional degrees as M.D., LL.B., D.D.S. and B.D. Also includes certain master's degrees when they constitute the *first professional* degree in their respective fields (see footnote 3 below).

[3] Includes degrees beyond the bachelor's or first professional level, but below the doctorate. This category does not include such degrees as Master of Library Science, Master of Social Work, Master of Business Administration, *etc. when these constitute first professional degrees* (see footnote 2 above).

[4] Does not include *Psychology*, which, because of its multicategory nature, has been listed independently.

[5] Includes degrees based on *secondary education* as the major field of study. Registrars were directed to classify degrees based on a *teaching major* in a particular subject-field—such as English, biology, physical sciences, business education, etc.—as degrees in English, biology, etc., and not as degrees in "Secondary Education."

[6] Does not include *Geography*, which, because of its multicategory nature, has been listed independently.

[7] Does not include *Geography*, *Philosophy*, or *Psychology*, which, because of their multicategory or comprehensive nature, have been listed independently in alphabetic order.

TABLE 20.—*Production of bachelor's degrees and bachelor's degrees in science and engineering: aggregate United States, academic years 1948–58*

Academic year	All fields [1]	Science and engineering			Percent science and engineering of total	Percent engineering of total science and engineering
		Total	Science [2]	Engineering		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1957–58	365, 748	77, 785	42, 453	35, 332	21. 3	45. 4
1956–57	340, 347	70, 178	38, 967	31, 211	20. 6	44. 5
1955–56	311, 298	61, 327	35, 015	26, 312	19. 7	42. 9
1954–55	287, 401	53, 359	30, 770	22, 589	18. 6	42. 3
1953–54	292, 880	53, 497	31, 168	22, 329	18. 3	41. 7
1952–53	304, 857	57, 531	33, 342	24, 189	18. 9	42. 0
1951–52	331, 924	68, 206	37, 657	30, 549	20. 5	44. 8
1950–51	384, 352	88, 465	46, 992	41, 473	23. 0	46. 9
1949–50	433, 734	108, 784	56, 538	52, 246	25. 1	48. 0
1948–49	366, 698	87, 742	44, 138	43, 604	23. 9	49. 7
1947–48	272, 144	65, 980	34, 884	31, 096	24. 2	47. 1

[1] Includes first Professional Degrees—Law, Medicine, Theology, etc.
[2] Includes Agriculture and Biological Sciences; Mathematics and Physical Sciences; excludes Psychology, Anthropology, Geography and Science, n.e.c.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred by Higher Educational Institutions*, 1948–58.

TABLE 21.—*Production of master's degrees and master's degrees in science and engineering: aggregate United States, academic years, 1948–58*

Academic year	All fields	Science and engineering			Percent science and engineering of total	Percent engineering of total science and engineering
		Total	Science [1]	Engineering		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1957–58	65, 614	16, 452	10, 664	5, 788	25. 1	35. 2
1956–57	61, 955	14, 660	9, 427	5, 233	23. 7	35. 7
1955–56	59, 440	13, 627	8, 903	4, 724	22. 9	34. 7
1954–55	58, 204	14, 150	9, 666	4, 484	24. 3	31. 7
1953–54	56, 823	13, 368	9, 164	4, 204	23. 5	31. 4
1952–53	61, 023	13, 782	10, 216	3, 566	22. 6	25. 9
1951–52	63, 587	15, 658	11, 567	4, 091	24. 6	26. 1
1950–51	65, 132	17, 100	12, 275	4, 825	26. 3	28. 2
1949–50	58, 219	15, 968	11, 472	4, 496	27. 4	28. 2
1948–49	50, 763	14, 869	10, 222	4, 647	29. 3	31. 3
1947–48	42, 417	12, 512	8, 314	4, 198	29. 5	33. 6

[1] Includes Agricultural, Biological and Physical Sciences, Mathematics, Psychology, Anthropology, Geography, Health Specialties, and Sciences, General Program.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred by Higher Educational Institutions*, 1948–58.

TABLE 22.—*Production of doctor's degrees and doctor's degrees in science and engineering: aggregate United States, decennially 1900–50, annually 1950–58*

Academic year	All fields	Science and engineering			Percent science and engineering of total	Percent engineering of total science and engineering
		Total	Science [1]	Engineering		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1957–58 [a]	8,[illegible]	4,840	4,193	647	54.1	13.4
1956–57 [a]	8,75[illegible]	4,764	4,168	596	54.4	12.5
1955–56 [a]	8,903	4,787	4,177	610	53.8	12.7
1954–55 [a]	8,840	5,036	4,437	599	57.0	11.9
1953–54 [a]	8,996	5,053	4,459	594	56.2	11.8
1952–53 [a]	8,309	4,724	4,206	518	56.9	11.0
1951–52 [a]	7,683	4,408	3,879	529	57.4	12.0
1950–51 [a]	7,338	4,212	3,692	520	57.4	12.3
1949–50 [a]	6,633	3,593	3,176	417	54.2	11.6
1939–40 [b]	3,290	1,812	.....	.....	55.1	.....
1929–30 [b]	2,261	1,072	.....	.....	47.4	.....
1919–20 [b]	566	323	.....	.....	57.1	.....
1909–10 [b]	362	180	.....	.....	49.7	.....
1899–1900 [b]	239	102	.....	.....	42.7	.....

[1] See table 21 for fields included in science.

[a] U.S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred by Higher Educational Institutions*, 1950–58.

[b] National Science Foundation, *Scientific Personnel Resources*, p. 72; sources cited in this publication are *Science*, National Research Council, and Office of Education.

TABLE 23a.—*Doctor's degrees, by major field: annually 1936–58*

Calendar year	All fields [1]	Non-science	Science and engineering [1]	Engineering	Physical sciences [2]	Mathematics	Life sciences [3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total all doctoral degrees 1936–58	115,171	50,038	65,133	6,895	26,574	3,144	28,520
1958 [a]	8,923	3,880	5,043	655	1,797	236	2,355
1957 [a]	8,839	3,738	5,101	603	1,836	260	2,402
1956 [b]	8,473	3,827	4,646	576	1,729	226	2,115
1955 [b]	8,906	3,843	5,063	648	1,798	243	2,374
1954 [b]	8,735	3,815	4,920	560	1,804	247	2,309
1953 [b]	8,374	3,574	4,800	565	1,781	226	2,228
1952 [b]	7,716	3,214	4,502	569	1,804	204	1,925
1951 [b]	7,345	3,096	4,249	586	1,778	204	1,681
1950 [b]	6,515	2,728	3,787	469	1,686	174	1,458
1949 [b]	5,362	2,138	3,227	446	1,438	144	1,199
1948 [b]	3,901	1,748	2,153	252	931	117	853
1947 [b]	2,954	1,409	1,545	116	676	116	637
1946 [b]	1,963	965	1,018	101	466	53	398
1945 [b]	1,639	797	842	65	372	38	367
1944 [b]	1,935	817	1,118	61	574	40	443
1943 [b]	2,539	1,104	1,435	49	706	41	639
1942 [b]	3,461	1,605	1,856	83	850	75	848
1941 [b]	3,538	1,560	1,978	110	947	96	825
1940 [b]	3,220	1,406	1,814	97	783	102	832
1939 [b]	2,848	1,277	1,571	61	717	90	703
1938 [b]	2,722	1,246	1,476	65	653	61	697
1937 [b]	2,740	1,216	1,524	90	750	73	611
1936 [b]	2,603	1,138	1,465	68	668	78	621

[1] The slight differences in total degrees and science and engineering degrees reported in this table and in table No. 22 is due to the use of different primary source material. The method of reporting is different and this table is for the calendar year whereas table No. 22 is for the academic year.

[2] Excludes Mathematics and Engineering; includes Anthropology, Archaeology, and Geography.

[3] Includes Psychology.

SOURCE: National Academy of Sciences—National Research Council.

[a] Preliminary estimates by National Research Council for 1957 and 1958.

[b] *Doctorate Production in U.S. Universities, 1920–50*, NAS–NRC, publication 582, pp. 6–7.

TABLE 23b.—*Percentage distribution of doctor's degrees, by major field: annually 1936–58*

Calendar year	Percent all degrees			Percent science and engineering degrees				
	All fields [1]	Non-science	Science and engineering	Science and engineering	Engineering	Physical sciences [2]	Mathematics	Life science [2]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total, all doctoral degrees, 1936–58	100.0	43.4	56.6	100.0	10.6	40.8	4.8	43.8
1958	100.0	43.5	56.5	100.0	13.0	35.6	4.7	46.7
1957	100.0	42.3	57.7	100.0	11.8	36.0	5.1	47.1
1956	100.0	45.2	54.8	100.0	12.4	37.2	4.9	45.5
1955	100.0	43.2	56.8	100.0	12.8	35.5	4.8	46.9
1954	100.0	43.7	56.3	100.0	11.4	36.7	5.0	46.9
1953	100.0	42.7	57.3	100.0	11.8	37.1	4.7	46.4
1952	100.0	41.7	58.3	100.0	12.6	40.1	4.5	42.8
1951	100.0	42.2	57.8	100.0	13.8	41.8	4.8	39.6
1950	100.0	41.9	58.1	100.0	12.4	44.5	4.6	38.5
1949	100.0	39.9	60.1	100.0	13.8	44.6	4.5	37.1
1948	100.0	44.8	55.2	100.0	11.7	43.3	5.4	39.6
1947	100.0	47.7	52.3	100.0	7.5	43.8	7.5	41.2
1946	100.0	48.7	51.3	100.0	9.9	45.8	5.2	39.1
1945	100.0	48.6	51.4	100.0	7.7	44.2	4.5	43.6
1944	100.0	42.2	57.8	100.0	5.5	51.3	3.6	39.6
1943	100.0	43.5	56.5	100.0	3.4	49.2	2.9	44.5
1942	100.0	44.8	55.2	100.0	4.5	45.8	4.0	45.7
1941	100.0	44.1	55.9	100.0	5.6	47.9	4.8	41.7
1940	100.0	43.7	56.3	100.0	5.3	43.2	5.6	45.9
1939	100.0	44.8	55.2	100.0	3.9	45.6	5.7	44.8
1938	100.0	45.8	54.2	100.0	4.4	44.3	4.1	47.2
1937	100.0	44.4	55.6	100.0	5.9	49.2	4.8	40.1
1936	100.0	43.7	56.3	100.0	4.6	47.7	5.3	42.4

Footnotes: See table 23a.

SOURCE: See table 23a.

TABLE 24.—*Teaching staff in public and nonpublic and in elementary and secondary schools: decennially 1900–50, annually 1950–58*

School year	Total	Public	Nonpublic	Elementary	Secondary
(1)	(2)	(3)	(4)	(5)	(6)
1957–58 [a]	1,412,000	1,254,000	158,000	.....	.....
1956–57 [b]	1,342,000	1,197,000	145,000	.....	.....
1955–56 [c]	1,266,000	1,136,000	130,000	.....	.....
1954–55 [d]	1,202,000	1,066,000	136,000	.....	.....
1953–54 [e]	1,166,000	1,032,000	[1] 134,000	743,000	424,000
1952–53 [f]	.....	983,000	.....	.....	.....
1951–52 [e]	1,087,000	963,000	[1] 124,000	702,000	385,000
1950–51 [f]	.....	928,000	.....	.....	.....
1949–50 [e]	1,032,000	914,000	[1] 118,000	666,000	366,000
1939–40 [e]	970,000	875,000	[1] 95,000	640,000	330,000
1929–30 [e]	938,000	854,000	[1] 84,000	703,000	235,000
1919–20 [e]	738,000	678,000	[1] 60,000	621,000	117,000
1909–10 [e]	569,000	523,000	[1] 46,000	.....	.....
1899–1900 [e]	460,000	423,000	[1] 37,000	.....	.....

[1] Data for "nonpublic teachers" are for "instructional staff."

[2] Data reported for 1927–28 and for instructional staff. *Biennial Survey of Education in the United States, 1946–48*, ch. I, p. 38.

[a] HEW press release, HEW-132 (8-28-58).

[b] HEW press release, HEW-F83 (8-17-57).

[c] HEW press release, HEW-D91 (9-2-56).

[d] HEW press release, HEW-C59 (9-8-55).

[e] Department of Health, Education, and Welfare, *HEW Trends, 1958*, p. 46.

[f] National Educational Association, *Estimates of School Statistics, 1958–59*, 1958–R6; NEA estimates vary between ±1.5% from Office of Education data.

TABLE 25.—*Faculty in institutions of higher education, continental United States, by sex: decennially 1900–50, biennially 1950–58*

Academic year	Faculty			Instructional staff at college level	Instructional staff as percent of total faculty
	Total	Men	Women		
(1)	(2)	(3)	(4)	(5)	(6)
1957–58	[a] 344,525	[b] 267,482	[b] 77,043	[a] 258,184	74.9
1955–56 [c]	298,910	230,342	68,568	228,188	76.3
1953–54 [c]	265,911	204,871	61,040	207,365	78.0
1951–52 [c]	244,488	187,136	57,352	183,758	75.2
1949–50	[d] 246,722	[d] 186,189	[d] 60,533	[e] 190,353	77.2
1939–40	[d] 146,929	[d] 106,328	[d] 40,601	[e] 110,885	75.5
1929–30	[e] 86,185	[e] 61,856	[e] 24,329	[e] 82,386	95.6
1919–20 [d]	48,615	35,807	12,808		
1909–10 [d]	36,480	29,132	7,348		
1899–1900 [d]	23,868	19,151	4,717		

SOURCE: U.S. Department of Health, Education and Welfare.

[a] Office of Education, *Faculty and Other Professional Staff in Institutions of Higher Education, First Term 1957–58*, OE–53030, p. 8.

[b] Unpublished Office of Education data from above study.

[c] *HEW Indicators, February 1959*, p. 22.

[d] Office of Education, *Biennial Survey of Education in the United States, 1954–1956*, "Statistics of Higher Education, 1955–56, Faculty, Students, and Degrees," ch. IV, sec. 1, p. 7.

[e] *Biennial, 1954–56*, "Statistics of Higher Education, 1955–56, Faculty, Students, and Degrees," ch. IV, sec. 1, p. 33.

TABLE 26.—*Total bachelor's degrees, number completing standard teaching certification requirements to teach in high school and high school science and mathematics: academic years 1948–59*

[In thousands]

Academic year	Total bachelor's degrees	Completed standard certification requirements to teach—			Percent science of all high school	Percent mathematics of all high school
		In high school	High school science	High school mathematics		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1958–59 [1] [a]		78.2	7.0	4.7	9.0	6.0
1957–58 [a]	365.7	69.1	5.5	3.4	8.0	4.9
1956–57 [a]	340.3	65.1	4.9	3.1	7.5	4.8
1955–56 [a]	311.3	56.8	4.3	2.5	7.6	4.4
1954–55 [a]	287.4	49.7	3.8	2.2	7.6	4.4
1953–54 [a]	292.9	48.9	3.6	2.2	7.4	4.5
1952–53 [a]	304.9	54.0	4.4	2.6	8.1	4.8
1951–52 [a]	331.9	61.5	5.2	3.1	8.5	5.0
1950–51 [a]	384.4	73.0	7.5	4.1	10.3	5.6
1949–50 [a]	433.7	86.9	9.1	4.6	10.5	5.3
1948–49 [2] [b]	366.6	66.9	6.3	3.7	9.4	5.5
1947–48 [2] [c]	272.1	43.2	3.8	2.4	8.8	5.6

[1] Preliminary reports.

[2] Data vary slightly from those included in *Scientific Personnel Resources*, NSF, 1955, p. 73; data included were taken from earlier publication of *Teacher Supply and Demand in Public Schools*.

SOURCE: National Education Association.

[a] "Research Bulletins and Reports," *Teacher Supply and Demand in Public Schools, 1959*, table 3, p. 12.

[b] *Teacher Supply and Demand, 1950*, p. 6.

[c] *Teacher Supply and Demand, 1949*, p. 6.

TABLE 27.—*Students completing standard teaching certification requirements to teach high school science and mathematics: academic years 1948–59*

[In thousands]

Academic year	Total science [a] and mathematics	Mathematics [b]	General [b] science	Biology [b]	Chemistry [b]	Physics [b]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1958–59	11.7	4.7	3.5	2.3	0.8	0.3
1957–58	8.9	3.4	2.7	1.9	.6	.3
1956–57	8.0	3.1	2.5	1.7	.5	.2
1955–56	6.8	2.5	1.9	1.7	.5	.2
1954–55	6.0	2.2	1.8	1.3	.5	.2
1953–54	5.8	2.2	1.6	1.3	.5	.2
1952–53	7.0	2.6	1.7	1.7	.7	.4
1951–52	8.4	3.1	2.2	2.0	.8	.4
1950–51	11.6	4.1	2.8	2.8	1.3	.6
1949–50	13.7	4.6	3.0	3.5	1.7	1.0
1948–49	10.0	3.7	2.1	2.4	1.2	.6
1947–48	6.2	2.4	1.3	1.4	.8	.3

[a] Detail may not add to total because of rounding.

[b] The figures for the detailed science fields were not taken from the current year of each publication but from the year previous to the date of each publication, e.g., the figures for 1948 were taken from the 1949 publication; the current year figures in each publication were preliminary.

SOURCE: National Education Association, *Teacher Supply and Demand in Public Schools, 1959–86*, p. 12—table 3 for cols. 1 through 6 for years 1958–59 and cols. 1 and 2 for years 1948–57. For detailed breakdown of science for other years see table 1 in earlier publications.

TABLE 28.—*Percentage distribution of teachers of high school mathematics and science according to semester hours of college credit [1] in subject, by size of school enrollment: [2] academic year 1957–58*

Semester hours of college credit	Mathematics				Science			
	Total	Small	Medium	Large	Total	Small	Medium	Large
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
30 or more hours	40.9	34.7	40.2	51.6	60.4	49.8	61.5	78.1
20–29 hours	22.7	21.9	22.0	24.8	17.8	21.2	17.8	11.9
10–19 hours	22.5	26.2	23.0	16.0	16.4	22.3	15.1	7.4
1–9 hours	12.4	15.6	13.3	6.1	5.1	6.5	5.2	2.4
No credits	1.5	1.6	1.5	1.5	.3	.2	.4	.2
Median semester hours	26.0	23.0	25.6	30 or more	30 or more	29.9	30 or more	30 or more

[1] Quarter hour credits were converted by respondents using a 3:2 ratio.

[2] Schools enrolling fewer than 300 students were small; schools enrolling 300–999 students were medium; and schools enrolling 1,000 or more students were large.

SOURCE: NEA, *Mathematics and Science Teaching and Facilities*, March 1959, pp. 39–40.

TABLE 29.—*All faculty and faculty engaged in R&D in the natural and social sciences, by major field of science: [1] academic year 1953–54*

Field	Employed faculty		Faculty engaged in R&D		Percent of faculty engaged in R&D	Percent of time devoted to R&D
	Total number	Full-time equivalent	Total number	Full-time equivalent		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total, all sciences	62,251	55,144	31,455	16,534	50.5	30.0
Total, natural sciences	(51,012)	(44,839)	(27,907)	(15,207)	(54.7)	(33.9)
Engineering	8,676	8,007	4,168	2,281	48.0	28.5
Physical sciences	10,244	9,510	5,068	2,636	49.5	27.7
Mathematics	4,377	3,998	1,214	564	27.7	14.1
Life sciences (including agriculture)	25,209	21,109	16,471	9,337	65.3	44.2
Psychology	2,506	2,215	986	399	39.3	17.6
Social sciences	11,239	10,305	3,548	1,327	31.6	12.9

[1] Based on reports from 987 colleges and universities. Data include agricultural experiment stations and exclude Federal research centers.

SOURCE: National Science Foundation, *Scientific Research and Development in Colleges and Universities, Expenditures and Manpower, 1953–54*, NSF–59–10, p. 65.

TABLE 30.—*Number of colleges and universities reporting, number of new full-time faculty reported, percentage distribution of faculty, by level of degree held; science and all other: 1953–54 and 1954–55; 1955–56 and 1956–57; 1957–58 and 1958–59*

Field	Doctor's degree		Master's degree plus 1 year		Master's degree		Less than master's degree	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
936 institutions reporting in[a]	1957–58	1958–59	1957–58	1958–59	1957–58	1958–59	1957–58	1958–59
Number of new faculty reported	2,354	2,161	1,505	1,703	3,409	3,339	2,025	1,897
Percent holding:								
All new faculty	25.3	23.8	16.2	18.7	36.7	36.7	21.8	20.8
New science faculty	32.7	32.2	11.4	13.4	28.4	30.0	27.5	24.4
All other new faculty	20.7	18.6	19.2	21.9	42.0	40.8	18.1	18.7
827 institutions reporting in[b]	1955–56	1956–57	1955–56	1956–57	1955–56	1956–57	1955–56	1956–57
Number of new faculty reported	1,692	1,952	1,128	1,504	2,243	2,933	1,274	1,919
Percent holding:								
All new faculty	26.7	23.5	17.8	18.1	35.4	35.3	20.1	23.1
New science faculty	34.7	30.6	12.3	11.7	26.2	26.9	26.8	30.8
All other new faculty	22.0	19.2	21.0	21.7	40.8	40.4	16.2	18.5
656 institutions reporting in[c]	1953–54	1954–55	1953–54	1954–55	1953–54	1954–55	1953–54	1954–55
Number of new faculty reported	1,329	1,333	770	878	1,363	1,577	770	906
Percent holding:								
All new faculty	31.4	28.4	18.2	18.7	32.2	33.6	18.2	19.3
New science faculty	40.3	36.4	13.9	13.2	24.7	27.0	21.1	23.4
All other new faculty	26.3	23.4	20.7	22.1	36.5	37.7	16.5	16.8

SOURCE: National Education Association.

[a] *Teacher Supply and Demand in Universities, Colleges and Junior Colleges, 1957–58 and 1958–59*, Research Report, 1959–R10, pp. 59–60.
[b] *Teacher Supply and Demand in Colleges and Universities, 1955–56 and 1956–57*, pp. 50–51.
[c] *Teacher Supply and Demand in Colleges and Universities, 1955–56 and 1956–57*, pp. 52–53.

TABLE 31.—*Percentage distribution of new full-time faculty at colleges and universities, by level of degree held in selected fields of science: 1953–54 and 1954–55; 1955–56 and 1956–57; 1957–58 and 1958–59*

Field	Percentage of new full-time teachers having—							
	Doctor's degree		Master's degree plus 1 year		Master's degree		Less than master's degree	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
936 institutions reporting in[a]	1957–58	1958–59	1957–58	1958–59	1957–58	1958–59	1957–58	1958–59
Agricultural sciences	35.0	30.1	5.5	6.9	25.6	30.1	33.9	32.9
Biological sciences	53.6	49.0	14.7	16.0	19.3	26.1	12.4	8.9
Engineering	13.2	15.8	8.3	9.7	27.3	31.6	51.2	42.9
Health sciences[1]	27.1	25.9	5.3	5.2	37.1	38.3	30.5	30.6
Mathematics	20.7	19.9	15.5	16.3	42.9	43.2	20.9	20.6
Physical sciences	48.5	44.3	13.6	16.8	24.0	21.7	13.9	17.2
Psychology	54.0	51.7	19.9	25.8	20.3	16.9	5.8	5.6
827 institutions reporting in[b]	1955–56	1956–57	1955–56	1956–57	1955–56	1956–57	1955–56	1956–57
Agricultural sciences	33.6	23.8	9.3	6.0	27.1	27.5	30.6	42.7
Biological sciences	56.5	54.2	13.5	15.2	20.3	23.7	9.7	9.9
Engineering	12.9	11.1	9.2	6.9	26.6	27.2	51.3	54.8
Health sciences[1]	31.0	22.8	3.9	4.5	33.2	33.3	31.9	39.4
Mathematics	27.3	20.5	18.4	17.0	35.5	35.5	18.8	27.0
Physical sciences	46.3	43.7	15.8	14.3	21.9	23.6	16.0	18.4
Psychology	59.2	55.3	15.4	22.6	20.8	15.2	4.6	6.9
656 institutions reporting in[c]	1953–54	1954–55	1953–54	1954–55	1953–54	1954–55	1953–54	1954–55
Agricultural sciences	34.9	33.7	11.4	7.0	25.7	20.6	28.0	38.7
Biological sciences	54.5	60.1	17.2	14.1	22.7	17.2	5.6	8.6
Engineering	15.9	14.4	9.6	7.7	29.0	34.7	45.5	43.2
Health sciences[1]	34.2	22.3	6.7	8.7	26.8	31.1	32.3	37.9
Mathematics	34.2	29.3	20.2	22.1	37.3	35.6	8.3	13.0
Physical sciences	53.0	46.9	14.0	15.7	19.0	26.6	14.0	10.8
Psychology	68.4	62.5	21.0	20.8	8.5	13.9	1.7	2.8

[1] Does not include dentistry and medicine.
SOURCE: National Education Association.

[a] *Teacher Supply and Demand in Universities, Colleges, and Junior Colleges, 1957–58 and 1958–59*, Research Report 1959–R10, pp. 59–60.
[b] *Teacher Supply and Demand in Colleges and Universities, 1955–56 and 1956–57*, pp. 50–51.
[c] *Teacher Supply and Demand in Colleges and Universities, 1955–56 and 1956–57*, pp. 52–53.

TABLE 32.—*Number of elementary and secondary schools, by control and level: continental United States, decennially 1930–50, biennially 1950–56*

[In thousands]

School year	Total	Public	Private	Elementary	Secondary
(1)	(2)	(3)	(4)	(5)	(6)
1955–56	146	130	[1] 16	116	30
1953–54	153	137	16	123	30
1951–52	162	148	14	135	27
1949–50	167	153	14	138	28
1939–40	238	223	15	209	29
1929–30	274	262	12	247	27

[1] Estimated.

SOURCE: U.S. Department of Health, Education, and Welfare, *HEW Trends, 1959*, p. 48.

TABLE 33.—*Number of public elementary and secondary schools, one teacher schools, and number of public school districts: continental United States, decennially 1930–50, biennially 1950–56*

[In thousands]

School year	Elementary and secondary	Elementary		Secondary	Public school districts
		Total	One teacher elementary schools		
(1)	(2)	(3)	(4)	(5)	(6)
1955–56	130	104	35	26	55
1953–54	137	111	43	26	63
1951–52	148	124	51	24	71
1949–50	153	128	60	25	84
1939–40	223	[1] 198	114	[1] 25	117
1929–30	262	238	149	24	[2] 127

[1] Estimated.
[2] Data for 1932.

SOURCE: U.S. Department of Health, Education, and Welfare, *HEW, Trends, 1959*, p. 48.

TABLE 34.—*Number of institutions of higher education, by highest level of offering, and by type of control: academic year 1958–59*

Type of control	Total	Junior colleges [1]	Bachelor's and/or first professional degree	Master's and/or second professional degree	PhD degree or equivalent	Other [2]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total	1,957	557	720	449	197	34
Public	627	309	112	164	86	6
State	386	37	108	152	83	6
District or city	291	272	4	12	3	...
Private	1,280	248	608	285	111	28
Nondenominational	309	108	181	136	67	17
Protestant	486	93	268	91	24	10
Roman Catholic	280	47	159	58	15	1
Jewish	[3] 5	...	...	...	5	...

[1] At least 2 but less than 4 years beyond the 12th grade.
[2] Generally non-degree granting; may offer graduate or undergraduate courses.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Education Directory, 1958–59, Part 3, Higher Education*, p. 11.

TABLE 35.—*Percentage of public high schools offering selected science and mathematics courses, by type of school: fall 1958*

Courses	Percent of schools offering courses				
	All schools	Regular 4-year high	Senior high	Junior-senior high	Undivided high
(1)	(2)	(3)	(4)	(5)	(6)
General science	85.3	85.1	89.7	83.8	79.8
Biology	90.3	87.7	97.1	94.4	87.0
Chemistry	63.8	56.8	92.5	70.7	54.4
Physics	56.8	47.9	91.9	65.6	45.4
General mathematics [1]	75.1	68.2	.....	79.2	69.4
Elementary algebra [1]	91.9	91.3	.....	95.5	92.5
Plane geometry	81.2	75.2	97.7	88.3	76.6
Intermediate algebra	63.3	55.2	89.0	70.0	59.0
Solid geometry	27.2	18.5	59.0	34.4	19.3
Plane trigonometry	33.4	24.1	58.4	46.1	24.5
Other mathematics [1]	18.5	13.7	49.7	26.2	15.8

[1] Junior high schools are included in the total but are not presented separately; 90.6 percent offered general Mathematics, 84.5 percent offered Elementary Algebra, and 4.2 percent offered other Mathematics.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Offerings and Enrollments in Science and Mathematics in Public High Schools, 1958*, pp. 6 and 23.

TABLE 36a.—*Number of institutions of higher education awarding earned degrees, by level of degree in selected scientific fields: academic year 1957–58*

Field of science	Number of institutions awarding—			
	Any level	Bachelor's	Master's	Doctor's
(1)	(2)	(3)	(4)	(5)
Awarding any science degree	1,069	1,002	292	130
Agricultural sciences	117	117	56	27
Biological sciences	881	875	190	99
Engineering	223	220	135	60
Mathematics	835	828	171	60
Physical sciences	862	861	221	100
Psychology	490	492	162	72

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred in Higher Educational Institutions, 1957–58*, p. 34, for fields by level of degree; totals from unpublished tabulation.

TABLE 36b.—*Number of institutions of higher education awarding earned degrees, by level of degree and by detailed scientific fields: academic year 1957–58*

Field of science (1)	Number awarding any degree (2)	Number of institutions awarding— Bachelor's (3)	Master's (4)	Doctor's (5)
Awarding any science degree	1,009	1,002	292	130
Agricultural sciences	117	117	56	27
Biological sciences	881	875	190	99
Premedical, predental, and preveterinary sciences	292	292	7	1
Biology, general	746	740	100	30
Botany, general	112	102	58	36
Zoology, general	147	140	72	42
Anatomy and histology	31	4	21	20
Bacteriology, virology, mycology, parasitology	103	75	74	47
Biochemistry	72	18	53	46
Biophysics	15	5	7	9
Entomology	43	31	32	17
Genetics	17	5	10	14
Optometry (preprofessional)	9	9		
Pathology (except plant pathology)	15		10	7
Pharmacology	31		13	23
Physiology (except plant physiology)	60	13	40	32
Plant pathology	28	9	26	14
Plant physiology	11	1	5	7
Biological sciences, all other	32	19	21	12
Engineering	223	220	135	60
Mathematical subjects	835	828	171	60
Mathematics	829	826	168	57
Statistics	34	22	25	12
Physical sciences	862	861	221	100
Physical sciences, general	192	183	21	4
Astronomy	20	12	8	10
Chemistry	812	807	187	96
Metallurgy	14	6	9	5
Meteorology	18	14	13	8
Physics	495	490	133	68
Geology	204	199	89	34
Geophysics	17	11	10	7
Oceanography	4	1	3	3
Earth sciences, all other	14	12	8	3
Physical sciences, n.e.c.	17	7	12	5
Psychology	499	492	162	73

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Earned Degrees Conferred in Higher Educational Institutions, 1957–58*, p. 34, for fields by level of degrees; totals from unpublished tabulation.

TABLE 37.—*Value of educational property in public elementary and secondary schools and in all institutions of higher education: continental United States, decennially 1900–50, biennially 1950–56*

[In thousands]

Academic year (1)	Value of property: Total [a] (2)	Public elementary secondary schools [b] (3)	Institutions of higher education [c] (4)
1955–56	$32,783,825	$23,882,000	[e]$8,901,825
1953–54	24,995,295	17,000,000	[e]7,995,295
1951–52	20,710,569	13,954,650	[e]6,755,915
1949–50	16,669,394	11,396,804	[d]5,272,590

Academic year (1)	Value of property: Total [a] (2)	Public elementary and secondary schools [b] (3)	Institutions of higher education [c] (4)
1939–40	10,388,893	7,635,113	[d]2,753,780
1929–30	8,136,422	6,211,327	[d]1,925,095
1919–20	3,151,052	2,409,719	[d]741,333
1909–10	1,551,540	1,091,008	[d]460,532
1899–1900	803,668	550,069	[d]253,599

[c] Including unexpended plant funds.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] Addition of columns (3) and (4).

[b] *Biennial Survey of Education in the U.S.—1954–56*, "Statistics of State School Systems; Organization, Staff, Pupils, and Finances, 1955–56", ch. 2, p. 28.

[c] *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular 571, p. 8.

[d] *Biennial* "Statistical Summary of Education, 1953–54", ch. 1, p. 50.

TABLE 38.—*Cost of construction of educational facilities; elementary, secondary, and higher education, by public and private institutions, in current and 1947–49 dollars: decennially 1920–50, annually 1950–57*

[In millions]

Year	Cost of construction in current dollars			Construction cost index (1947–49 = 100)	Construction cost 1947–49 dollars
	Total	Public	Private		
(1)	(3)	(3)	(4)	(5)	(6)
1957	$3,350	$2,825	$525	147.1	$2,277
1956	3,085	2,549	536	141.8	2,176
1955	2,934	2,442	492	135.1	2,172
1954	2,663	2,134	529	131.1	2,031
1953	2,140	1,714	426	128.7	1,663
1952	1,970	1,619	351	123.8	1,591
1951	1,858	1,513	345	119.0	1,561
1950	1,427	1,133	294	110.7	1,289
1940	206	156	50	57.4	359
1930	482	364	118	52.8	913
1920	212	190	22	60.8	349

SOURCE: U.S. Department of Health, Education, and Welfare, *HEW Trends, 1959*, p. 49; derived from Departments of Commerce and Labor.

TABLE 39.—*Expenditures for plant expansion in institutions of higher education and captial outlay in public elementary and secondary schools: decennially 1900–50, biennially 1950–56*

[In thousands]

Academic year	Total [a]	Institutions of higher education	Public elementary and secondary schools [b]	Academic year	Total [a]	Institutions of higher education	Public elementary and secondary schools [b]
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1955–56	$3,034,989	[c] $647,702	$2,387,187	1939–40	341,738	[d] 83,764	257,974
1953–54	2,588,306	[d] 533,128	2,055,178	1929–30	495,984	[d] 125,106	370,878
1951–52	1,980,649	[d] 403,317	1,477,332	1919–20			153,543
1949–50	1,431,007	[d] 416,831	1,014,176	1909–10			69,978
				1899–1900			35,451

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] Addition of columns (3) and (4).
[b] *Biennial Survey of Education in the United States—1954–56*, "Statistics of State School Systems: 1955–56, Organization, Staff, Pupils, and Finances," ch. 2, p. 28.
[c] *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular No. 571, p. 8.
[d] *Biennial*, "Statistics of Higher Education: Receipts, Expenditures and Property, 1953–54," ch. 4, sec. 2, p. 6.

TABLE 40.—*Endowments and other restricted funds in institutions of higher education, by type of funds and control: decennially 1900–50, biennially 1950–56*

[In thousands]

Academic year	Total	Control		Funds		
		Public	Private	Endowment funds	Annuity funds	Student loan funds
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1955–56 [a]	$3,837,229	$760,170	$3,077,059	$3,703,473	$79,275	$58,481
1953–54 [b]	3,312,565	627,058	2,685,508	3,196,520	67,253	49,192
1951–52 [c]	2,989,954	544,556	2,445,398	2,868,530	74,640	46,784
1949–50	[d] 2,644,323	[d] 413,656	[d] 2,230,665	[e] 2,601,223	(*)	[e] 43,100
1939–40 [f]	1,764,604	218,858	1,545,846	1,686,283	49,537	28,784
1929–30	[g] 1,372,068	[g] 134,603	[g] 1,237,465	[e] 1,372,068	(*)	(*)
1919–20	[h] 569,071					
1909–10	[h] 259,377					
1899–1900	[h] 166,194					

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] U.S. Department of Health, Education, and Welfare, Office of Education, *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular No. 571, p. 8.

[b] *Biennial Survey of Education in the United States—1953–54*, "Statistics of Higher Education, Receipts, Expenditures and Property, 1953–54," chapter 4, section 2, p. 68.

[c] *Biennial, 1950–52*, "Statistics of Higher Education: Receipts, Expenditures, and Property, 1951–52," ch. 4, sec. 2, p. 44.

[d] *Biennial, 1948–50*, "Statistics of Higher Education: Receipts, Expenditures, and Property, 1949–50," ch. 4, sec. 2, p. 34.

[e] *Biennial 1950–52*, "Statistics of Higher Education: Receipts, Expenditures, and Property, 1951–52," ch. 4, sec. 2, p. 47.

[f] *Biennial 1938–40*, vol. 2, ch. 4, p. 42.

[g] *Biennial 1928–30*, ch. IV, and V, aggregated listings.

[h] *Biennial 1918–20*, ch. IV and V, 1920 reported for all endowment, all institutions; 1900 and 1910 data exclude professional schools, teachers colleges and normal schools.

TABLE 41.—*Total educational expenditures,[1] by level and control: decennially 1920–50, biennially 1950–58*

[In millions]

Academic year	All levels			Elementary and secondary		Higher education	
	Total	Public	Private	Public	Private	Public	Private
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1957–58	$19,763	$15,697	$4,066	$12,954	$2,113	$2,743	$1,953
1955–56	16,933	13,327	3,606	10,979	1,774	2,348	1,832
1953–54	13,950	11,084	2,866	9,172	1,364	1,912	1,502
1951–52	11,312	8,967	2,345	7,402	1,036	1,565	1,309
1949–50	9,335	7,312	2,023	5,883	790	1,430	1,233
1939–40	3,352	2,756	597	2,364	230	392	367
1929–30	3,234	2,655	578	2,366	235	289	343
1919–20		1,156		1,040		116	151

[1] Includes current expenditures, capital outlay, and interest.

SOURCE: U.S. Department of Health, Education, and Welfare, *HEW Trends, 1958*, p. 50.

TABLE 42.—*Revenue receipts of public elementary and secondary schools: decennially 1900–50, biennially 1950–56*

[In thousands]

School year (1)	Total (2)	State taxes and appropriations (3)	Intermediate and local taxes and appropriations (4)	All other sources (5)
1955–56	$9,686,677	$3,699,721	$5,116,788	$870,168
1953–54	7,866,853	2,789,718	4,336,828	740,306
1951–52	6,423,816	2,400,471	3,512,597	510,748
1949–50	5,437,004	2,122,763	2,900,561	413,680
1939–40	2,260,527	658,983	1,490,425	111,119
1929–30	2,088,557	329,312	1,645,688	113,557
1919–20	970,120	134,279	758,897	76,945
1909–10	433,064	64,605	312,222	56,238
1899–1900	219,766	37,887	149,487	32,392

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Biennial Survey of Education in the United States—1954–56*, "Statistics of State School Systems: Organization, Staff, Pupils, and Finances, 1955–56," ch. 2, p. 28.

TABLE 43.—*Expenditures of public elementary and secondary schools: decennially 1900–50, biennially 1950–56*

[In thousands]

School year (1)	Total (2)	Current expenditures for day school (3)	Capital outlay (4)	Interest (5)	Other expenditures [1] (6)
1955–56 [a]	$10,955,047	$8,251,420	$2,387,187	$215,699	$100,741
1953–54 [b]	9,092,449	6,790,925	2,055,178	153,884	92,464
1951–52 [b]	7,344,236	5,722,162	1,477,332	114,310	30,432
1949–50 [b]	[c] 5,837,642	4,687,274	1,014,176	100,578	35,614
1939–40 [b]	2,344,049	1,941,799	257,974	130,909	13,367
1929–30 [b]	[c] 2,316,791	1,843,552	370,878	92,536	9,825
1919–20 [b]	1,036,152	861,120	153,563	18,212	3,277
1909–10 [b]	426,250	356,272	69,978	.....	.....
1899–1900 [b]	214,965	179,514	35,451	.....	.....

[1] Includes summer schools, community colleges and adult education. Beginning in 1954 also includes community services, formerly classified with "current expenditures for day schools."

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Biennial Survey of Education in the United States—1952–54.*

[a] *Biennial Survey of Education in the United States, 1954–56*, "Statistics of State School Systems: 1955–56 Organization, Staff, Pupils, and Finances," ch. 2, p. 28.

[b] *Biennial*, "Statistics of State School Systems: Organization, Staff, Pupils, and Finances 1953–54," ch. 2, p. 27.

[c] *Biennial*, ch. 2, p. 17, for years 1930 and 1950 in total column.

TABLE 44.—*Current income of institutions of higher education in continental United States, excluding plant fund receipts, by source of income: decennially 1910–50, biennially 1950–56*

[In thousands]

Academic year	Total [1]	Educational and general						Auxiliary enterprises, activities, and miscellaneous income [3]
		Student fees	Government			Private gifts, grants, and endowment earnings	Sales, service and others [2]	
			Total	State and local	Federal			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1955–56 [a]	$3,628,773	$729,926	$1,492,385	$998,499	$493,886	$390,579	$272,840	$746,014
1953–54 [b]	2,966,264	554,179	1,259,297	839,754	419,543	318,792	224,239	609,758
1951–52 [b]	2,502,451	446,591	1,134,326	683,315	451,011	262,685	177,276	541,573
1949–50 [b]	2,374,645	394,610	1,077,665	553,336	524,319	214,968	146,612	541,160
1939–40 [b]	715,211	200,897	214,474	175,614	38,860	111,757	44,160	143,923
1929–30 [b]	554,511	144,126	171,505	150,847	20,658	94,777	72,657	71,446
1919–20 [c]	200,000	42,000	75,000	[4] 62,000	[5] 13,000	34,000	22,000	27,000
1909–10 [c]	77,000	18,000	26,000	21,000	5,000	16,000	8,000	9,000

[1] Columns may not add exactly to total due to rounding.
[2] Includes income from organized activities related to instructional departments and such miscellaneous income as interest on current funds, rent from institutional property, transcript fees, and library fines.
[3] Auxiliary enterprises are enterprises operated primarily for service to students and staff and are intended to be self-supporting. They include student dormitories, dining halls, cafeterias, bookstores, faculty housing, intercollegiate athletic programs, and university presses.
[4] May also include Federal funds for teachers colleges and normal schools.
[5] Universities, colleges, and professional schools only; teachers colleges and normal schools omitted.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.
[a] *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular No. 571, p. 8.
[b] *Biennial Survey of Education in the United States—1952–54*, "Statistics of Higher Education: Receipts, Expenditures and Property, 1953–54," ch. 4, sec. 2, p. 6.

TABLE 45.—*Total income of institutions of higher education, continental United States, by type of income: decennially 1900–50, biennially 1950–56*

[In thousands]

Academic year	Total [1]	Current income [2]		Receipts for plant expansion	Private gifts and grants for fund increase
		Education and general	Other current income [3]		
(1)	(2)	(3)	(4)	(5)	(6)
1955–56 [a]	$4,209,014	$2,881,759	$747,014	$437,074	$143,177
1953–54 [b]	3,364,830	2,356,506	609,758	292,028	106,538
1951–52 [b]	3,014,225	2,020,878	541,573	355,614	96,160
1949–50 [b]	2,970,602	1,833,845	541,160	528,747	66,850
1939–40 [b]	825,938	571,298	143,923	56,209	[4] 44,518
1929–30 [b]	700,101	483,065	71,446	82,078	63,512
1919–20		[c] 172,929	[d] 27,000		
1909–10		[e] 67,917	[e] 8,966		
1899–1900		[e] 35,084			

[1] Addition of columns (3) through (6).
[2] Current income of this table is equal to total current income of table 44.
[3] Includes auxiliary enterprises, student aid income, and other current income.
[4] From all sources.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.
[a] *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular No. 571, p. 8.
[b] *Biennial Survey of Education in the United States—1952–54*, "Statistics of Higher Education: Receipts, Expenditures and Property, 1953–54," ch. 4, sec. 2, p. 6.
[c] *Biennial* "Statistical Summary of Education, 1953–54," ch. 1, p. 50.
[d] *HEW Trends, 1959*, p. 52 (confirmed per phone conversation with Mr. Henry Badger, Office of Education 4–6–59).
[e] Mr. Henry Badger, Office of Education, 4–13–59.

TABLE 46.—*Total expenditures of institutions of higher education, continental United States, by category of expenditure: decennially 1930–50, biennially 1950–56*

[In thousands]

Academic year	Total expenditures [1]	Current expenditures				Expenditures for plant expansion
		Total	Resident instruction	Organized research	Other expenditures [2]	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1955–56 [a]	$4,172,446	$3,524,744	$1,148,510	$506,097	$1,870,137	$647,702
1953–54 [b]	3,435,594	2,902,466	966,769	374,922	1,560,775	533,128
1951–52 [b]	2,874,325	2,471,008	823,117	317,928	1,329,963	403,317
1949–50 [b]	2,662,492	2,245,661	780,994	225,341	1,239,326	416,831
1939–40 [b]	758,452	674,688	280,248	27,266	367,174	83,764
1929–30 [b]	632,248	507,142	221,302	18,007	267,833	125,106

[1] Addition of columns (3) and (7).
[2] Includes: administration, physical plant, libraries and other educational and general expenditures, and auxiliary enterprises and activities and miscellaneous expenditures.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] *Financial Statistics of Institutions of Higher Education: Statistical Summary, 1955–56*, Circular No. 571, p. 8.
[b] *Biennial Survey of Education in the United States—1952–54*, "Statistics of Higher Education: Receipts, Expenditures, and Property, 1953–54," ch. 4, sec. 2, p. 6.

TABLE 47a.—*Average annual current expenditure per pupil in average daily attendance in full-time day schools, in city school systems, by city-size group: decennially 1920–50, biennially 1950–56*

School year	Total	Population size of cities				
		Over 100,000	25,000–99,999	10,000–24,999	5,000–9,999	2,500–4,999
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1955–56 [a]	$303	$329	$305	$286	$275	$268
1953–54 [b]	276	302	277	259	246	242
1951–52 [b]	256	282	258	234	225	221
1949–50 [b]	223	247	229	205	194	192
1939–40 [b]	106	127	101	87	.....	.....
1929–30 [c]	.....	119	98	85	.....	.....
1919–20 [d]	.....	75	70	65	.....	.....

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] *Biennial Survey of Education in the United States, 1954–56*, "Statistical Summary of Education, 1955–56," ch. 1, unpublished data as of Nov. 17, 1959;
[b] *Biennial*, "Statistical Summary of Education, 1953–54," ch. 1, p. 48;
[c] *Biennial*, "City School System, 1929–30," ch. 3, p. 94.
[d] *Biennial*, "City School System, 1919–20," ch. 3, pp. 114–16.

TABLE 47b.—*Average annual current expenditure per pupil in average daily attendance in 455 city school systems, by region and by city-size group; school year 1955–56*

Region	City-size group	Total annual average expenditure	Average median expenditure per pupil in—			
			Northeast	North Central	South	West
(1)	(2)	(3)	(4)	(5)	(5)	(7)
I	Over 100,000	$329	$340	$306	$240	$323
II	25,000–99,999	305	340	284	191	275
III	10,000–24,999	286	296	258	170	290
IV	2,500–9,999	275	274	263	185	290

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Biennial Survey of Education in the United States—1954–56*, "Statistical Summary of Education—1955–56," ch. 1, pp. 50–51.

TABLE 48.—*Average annual cost of tuition to undergraduate college students, by type of institutional control: selected years 1940–59*

Academic year	All institutions	Publicly controlled	Privately controlled	Academic year	All institutions	Publicly controlled	Privately controlled
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1958–59 [a] [1]	$385	$185	$766	1949–50 [c]	249	109	468
1957–58 [b] [2]	355	166	681	1939–40 [c]	165	70	328
1954–55 [c]	305	132	599				

[1] Data obtained by selecting all institutions with enrollments over 2,500 (250 institutions) reporting in Office of Education, *Higher Education Planning and Management Data, 1958–59*, p. 73, and calculating averages.

[2] Data obtained by selecting all institutions with enrollments over 2,000 (260 institutions) reporting in Office of Education, *Higher Education Planning and Management Data, 1957–58*, p. 68, and calculating averages.

The data for 1958 and 1959 are not strictly comparable with the prior years but do indicate the direction and approximate magnitude of change.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] *Higher Education Planning and Management Data, 1958–59*, p. 73.

[b] *Higher Education Planning and Management Data, 1957–58*, p. 68.

[c] American Academy of Political and Social Sciences, *The Annals*, September 1955, "Trends in Tuition Charges and Fees," p. 149; figures used are basic Office of Education data gathered for 196 institutions.

TABLE 49.—*Average annual cost of college attendance to undergraduate students: academic years 1940, 1953, and 1957.*

Academic year	Private	Percent increase over 1940	Public	Percent increase over 1940
(1)	(2)	(3)	(4)	(5)
1956–57	$2,047	98	$1,493	100
1952–53	1,847	81	1,293	73
1939–40	1,023		747	

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Costs of Attending College*, Bulletin 1957. No. 9, p. 29.

TABLE 50.—*Institutional aid to students, by institutions of higher education, type of aid by level, number aided and amount of support: academic year 1955–56*

	Type of aid				
		Earnings and gifts			
	Total	Total	Fellowships and scholarships [1]	Assistantships and undergraduate employment	Loans [2]
(1)	(2)	(3)	(4)	(5)	(6)
Number of students aided:					
Total	687,754	580,140	262,255	317,885	107,614
Undergraduate [a]	602,956	525,849	237,370	288,479	77,107
Graduate [b]	84,798	54,291	24,885	29,406	30,507
Dollar amount received (thousands):					
Total	$202,366	$184,916	$83,976	$100,940	$17,450
Undergraduate [a]	144,132	131,669	65,737	65,932	12,462
Graduate [b]	58,234	53,247	18,239	35,008	4,987

[1] Includes 4,837 assistantships valued at $4,867,845, which were reported as "undergraduate and graduate" by 6 universities.

[2] Includes loans to 23,819 students in the amount of $3,315,092, reported as "undergraduate and graduate."

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education.

[a] *Financial Aid for College Students: Undergraduate*, Bulletin 1957 No. 18.

[b] *Financial Aid for College Students: Graduate*, Bulletin 1957 No. 17.

TABLE 51.—*Number of students at institutions of higher education receiving Federal funds, by educational level and major field of study: academic year 1953–54*

Field	Total	Undergraduate	Graduate	Postdoctoral
(1)	(2)	(3)	(4)	(5)
Total, all fields	389,132	344,964	42,850	1,318
Total natural science	93,781	76,353	16,217	1,211
Engineering	55,211	49,584	5,621	6
Physical sciences and mathematics	17,265	10,017	7,214	34
Life sciences (including psychology)	21,305	16,752	3,382	1,171
Social science	7,521	6,047	1,421	53
"Nonsciences"	281,530	262,564	18,912	54
Field of study not designated	6,300	.....	6,300	.....

SOURCE: National Science Foundation, *Federal Support for Science Students in Higher Education, 1954*, NSF–56–18, p. 22.

TABLE 52.—*Number of graduate students supported, first year and advanced years, by major field: April 1954*

Field [1]	Total	First year	Advanced year
(1)	(2)	(3)	(4)
Total, all fields	37,036	14,011	23,025
Total science	22,770	8,246	14,524
Engineering	3,537	1,805	1,732
Physical sciences	9,671	3,300	6,371
Mathematics	1,419	530	889
Life sciences	8,143	2,611	5,532
All other fields	14,266	5,765	8,591

[1] See table 14, "Graduate student enrollment," for listing of fields.

SOURCE: National Science Foundation, *Graduate Student Enrollment and Support in American Colleges and Universities, 1954*, NSF–57–17, pp. 269–272.

TABLE 53.—*Number of graduate students supported, type and source of support, by major field: April 1954*

Field [1]	Total	Type of support			Source of support		
		Assistantships		Fellowships	Non-Federal		Federal Government
		Teaching	Research		Institutions	Other	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total, all fields	37,036	16,523	11,860	8,653	24,159	5,870	7,007
Total science	22,770	9,107	9,558	4,105	12,699	3,832	6,239
Engineering	3,537	1,012	1,686	839	1,523	810	1,204
Physical sciences and mathematics	11,090	5,319	3,947	1,824	6,375	1,376	3,339
Life sciences	8,143	2,776	3,925	1,442	4,801	1,646	1,696
All other fields	14,266	7,416	2,302	4,548	11,460	2,038	768

[1] See table 14, "Graduate student enrollment," for listing of fields.

SOURCE: National Science Foundation, *Graduate Student Enrollment and Support in American Colleges and Universities, 1954*, NSF–57–17, p. 35.

TABLE 54a.—*Mean salaries and numbers of faculty members, by rank in undergraduate colleges of 4-year institutions: academic year 1958-59*

Rank	Public and private		Public		Private	
	Number	Mean salary	Number	Mean salary	Number	Mean salary
(1)	(2)	(3)	(4)	(5)	(6)	(7)
All ranks	64, 901	$6, 630	42, 646	$6, 780	22, 255	$6, 350
Instructors	13, 047	4, 840	8, 644	4, 980	4, 403	4, 580
Assistant professors	20, 665	5, 860	14, 047	6, 060	6, 618	5, 430
Associate professors	15, 321	6, 920	10, 179	7, 150	5, 142	6, 470
Professors	15, 868	8, 840	9, 776	9, 040	6, 092	8, 510

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Higher Education Planning and Management Data, 1958-59*, p. 34.

TABLE 54b.—*Median mean salaries of full-time deans and faculty members, by length of employment, type of institution and control: academic year 1958-59*[1]

Type of school control	Deans	Professors	Associate professors	Assistant professors	Instructors
(1)	(2)	(3)	(4)	(5)	(6)
	Employed no more than 10 months				
Universities:					
Public	$10, 880	$9, 410	$7, 310	$5, 980	$4, 900
Private	14, 460	10, 360	7, 290	5, 990	4, 870
Liberal arts:					
Public	10, 900	8, 610	7, 370	6, 360	4, 960
Private	7, 980	6, 770	5, 810	5, 160	4, 520
Teachers colleges:					
Public	7, 850	8, 100	7, 000	5, 920	5, 150
Private					
Junior colleges:					
Public	8, 220	6, 300	5, 440	5, 590	6, 560
Private	5, 900	4, 270	4, 290	4, 780	4, 360
	Employed for more than 10 months				
Universities:					
Public	$12 670	$10, 110	$8, 160	$6, 980	$5, 730
Private	10, 990	9, 340	7, 760	6, 810	5, 329
Liberal arts:					
Public	10, 420	7, 910	6, 500	5, 990	4, 700
Private	8, 010	7, 030	5, 970	5, 480	4, 640
Teachers colleges:					
Public	10, 770	8, 110	6, 840	6, 370	5, 190
Private	9, 000				
Junior colleges:					
Public	9, 100	8, 950	8, 880	7, 420	5, 860
Private	6, 580	6, 320	5, 130	3, 930	4, 430

[1] To prevent the association of salaries with particular institutions, salaries have been omitted when fewer than 4 appear in a category.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Higher Education Planning and Management Data, 1958-59*, pp. 35-46.

TABLE 54c.—*Median mean salaries of full-time deans and faculty members, by length of employment, type of institution and control: academic year 1957–58*

Type of school control	Deans	Professors	Associate professors	Assistant professors	Instructors
(1)	(2)	(3)	(4)	(5)	(6)
	Employed no more than 10 months				
Universities:					
Public	$8,340	$8,680	$6,840	$5,790	$4,700
Private	7,820	8,510	6,570	5,580	4,600
Liberal arts:					
Public	7,400	8,080	7,080	6,270	4,770
Private	6,490	6,290	5,380	4,840	4,220
Teachers colleges:					
Public	7,580	7,440	6,700	5,890	4,860
Private	[1] 6,000	5,330	5,770	4,720	4,240
Junior colleges:					
Public	6,700	[2]	[2]	6,220	[2]
Private	4,030	[2]	[2]	3,860	[2]
	Employed for more than 10 months				
Universities:					
Public	$11,800	$9,670	$7,900	$6,610	$5,440
Private	10,850	9,800	7,420	6,720	5,120
Liberal arts:					
Public	9,800	6,880	5,570	5,400	4,130
Private	7,440	6,210	5,200	4,930	4,220
Teachers colleges:					
Public	9,870	7,060	6,020	5,550	4,890
Private	7,200	7,990	6,160	5,180	4,480
Junior colleges:					
Public	8,700	[2]	[2]	6,740	[2]
Private	5,930	[2]	[2]	4,450	[2]

[1] 1 individual.
[2] All ranks were combined.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education, *Higher Education Planning and Management Data, 1957–58*, Circular 517, pp. 31–37.

TABLE 55.—*Median salaries and income of engineering faculties, by academic rank and institutional control: academic year 1957–58*

Rank	Total, all institutions		Public		Private	
	Salaries	Income	Salaries	Income	Salaries	Income
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Instructor	$4,950	$5,900	$5,000	$5,850	$4,800	$5,900
Assistant professor	6,060	7,500	6,043	7,313	6,100	7,900
Associate professor	7,350	9,000	7,250	8,600	7,500	9,700
Professor	9,200	12,000	9,000	10,600	9,563	13,240
Lecturer	5,600	6,000	5,600	6,250	6,000	6,000
Department head	10,000	12,450	10,000	12,000	10,000	13,215
Dean	12,500	14,572	12,000	14,000	13,250	17,275

SOURCE: Miernyk, W. H., *Salaries and Income of Engineering Teachers, 1958*, prepared for Engineers Joint Council and the American Society for Engineering Education, 1959, p. 8.

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